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ABSTRACT

Rural-urban fiscal and demographic differences were identified in local governments of Maryland, Massachusetts, New York, and Pennsylvania. Census data and a classification system of urban and rural counties were used to analyze differences in local government revenue/expenditure levels and patterns, expenditure categories, population change, percent of population over 65, unemployment, and personal income per capita. Urban counties were found to have higher revenue/expenditure levels, lower education and highway expenditures, higher intergovernmental aid per capita, and higher property taxes. Rural counties were found to have lower revenue/expenditure levels, budgets dominated by education and highway expenditures, high percentage of elderly/low-income populations, and more population growth. Identified needs for further research included: (1) assess implications of rural-urban differences for public policy planning; (2) develop data sources and research designs specific to governmental structures and policy concerns of the respective states; (3) improve descriptive research on local government characteristics; (4) resolve problems of lack of comparable data on local government activities; and (5) recognize complexities of relating to processes of governance such functions as community preferences and circumstances, service costs, and ability to pay. Figures in the text present report data; tables of county types and comparative fiscal data comprise the appendix. (LFL)

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FINANCIAL AND DEMOGRAPHIC CHARACTERISTICS OF URBAN AND RURAL LOCAL GOVERNMENTS IN FOUR NORTHEAST STATES

University of Massachusetts
Amherst, Massachusetts

January 1987

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UNIVERSITY OF MASSACHUSETTS
AT AMHERST

Draper Hall
Amherst, MA 01003

Department of Agricultural and
Resource Economics

February 13, 1987

Dr. Daryl K. Heasley, Director
Northeast Regional Center for Rural Development
104 Weaver Building
The Pennsylvania State University
University Park, PA 16802

LETTER OF INTENT

Dear Daryl:

The researchers involved in the recent research project, "A Comparative Analysis of Urban and Rural Sector Local Government Finances in the Northeast," have expressed interest in continuing research in this area. The preliminary analysis showed large and consistent economic and demographic differences between urban and rural local governments. The lower level of public and private fiscal resources exhibited in rural places suggest a compelling case for rural need that is not currently understood or responded to by policymakers in these primarily urban states.

This preliminary analysis relied on national level data sources and typology of urban/rural places. Because of the complexity and diversity associated with local government finances, we believe further research must be conducted which uses state or local government level data, and typologies which reflect the unique structural and economic characteristics of the individual states. This research would validate the preliminary research, and further investigate the economic, social and structural conditions associated with the public economies of rural local governments.

The proposed research project would have two major components:

(1) A comparative analysis of fiscal condition among the four states will focus on three variables: fiscal capacity, revenue effort, and revenue burden, among urban and rural local governments. The data sources and units of analysis will be specific to the four states. Thus, in New York State the focus of analysis will be county government, while in Massachusetts research will focus on municipal finances, since city and town governments play a dominant role in local government activity.

(2) Four case studies will examine rural policy issues of current concern in the four Northeast states. Although the topics of the four case studies are expected to vary by state, the studies will share a common organizational framework and methodological approach.

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In Masssachusetts, Cleve Willis, Chair of Agricultural and Resource Economics, and Rick Feldman, CRD Program Leader, have offered support for this project. Ted Alter of Pennsylvania, Paul Eberts of New York, and Phil Favero of Maryland have all indicated interest in drafting a joint proposal.

We are grateful to the Northeast Regional Center for your support of the earlier project. We hope this agenda for continued research will also be of interest to the Center. Please contact us if the information presented is not sufficient. Thank you again for your assistance and support.

Sincerely yours,

Catherine Flynn
Extension Public Finance Specialist

George McDowell
Associate Professor

cc: Betty Jean Bouffard
Rick Feldman
Cleve Willis
Ted Alter
Nan Booth
Phil Favero
Paul Eberts

UNIVERSITY OF MASSACHUSETTS
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Department of Agricultural and
Resource Economics

February 13, 1987

Dr. Daryl K. Heasley, Director
Northeast Regional Center for Rural Development
104 Weaver Building
The Pennsylvania State University
University Park, PA 16802

Dear Daryl:

Enclosed are three copies of the Final Report for the research project, "A Comparative Analysis of Urban and Rural Sector Local Government Finances in the Northeast", funded by the Northeast Regional Center for Rural Development.

The findings of the Report suggest that there are major fiscal and demographic differences among urban and rural local governments in the four states, although there is a good deal of variation among the states. Generally, it indicates that many rural governments have lower levels of resources and more limited public services, and that rural residents pay generally higher property taxes while experiencing lower levels of personal income.

The researchers involved in the project are interested in pursuing the work further, specifically in validating these preliminary findings and in focusing on specific rural policy issues which are raised by the research. Enclosed is a letter of intent describing a proposed research agenda.

We are grateful for the opporunity afforded by this grant to focus on issues of concern to rural local governments, and hope this information will prove useful to you and to other researchers and policymakers in the Northeast. Thank you for your support.

Sincerely Yours,

Catherine Flynn
Extension Public Finance Specialist

cc: George McDowell, Cleve Willis, George Yocher, Betty Jean Bouffard, Ted Alter, Paul Eberts, Phillip Favero, Nan Booth

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FINANCIAL AND DEMOGRAPHIC CHARACTERISTICS OF URBAN AND RURAL LOCAL GOVERNMENTS IN FOUR NORTHEAST STATES

University of Massachusetts
Amherst, Massachusetts

January 1987

This report was funded by a grant from the Northeast Regional Center for Rural Development, Pennsylvania State University

This Extension and research project is a joint effort, with the University of Massachusetts taking the lead role. Participating researchers are listed alphabetically by state, as follows:

Maryland:
Nan Booth
Philip Favero

Massachusetts:
Betty Jean Bouffard
Catherine L. Flynn
George R. McDowell
Cleve E. Willis
George M. Yocher

New York:
Paul Eberts

Pennsylvania:
Ted Alter
Diane McLaughlin

We are grateful for the assistance of Richard Reeder, Economist, State and Local Government Section, USDA-ERS-ARED, who provided the state-specific county codes used for the urban/rural typology; and to Eileen Keegan and Glenn Caffrey of the University of Massachusetts Agricultural and Resource Economics Department, who provided invaluable assistance in computer programming.

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SUMMARY

A preliminary analysis of the financial and demographic characteristics of local governments in Maryland, Massachusetts, New York and Pennsylvania shows that large differences are found in the level of local government revenues and expenditures of urban and rural counties. When the counties are classified according to an urban/rural typology, and local government finances aggregated to that level, urban counties show consistently higher revenue and expenditure levels.

When major revenue and expenditure categories are analyzed, clear differences continue to appear between urban and rural counties. Education and highway expenditures, both on a per capita basis and as a percentage of total budget, are generally significantly lower among the most urban counties. Intergovernmental aid per capita is higher in the most urban counties in three of the four states (Pennsylvania showed a somewhat U-shaped curve). Property taxes per capita generally showed a U-shaped curve, with the most urban and most rural counties both showing relatively higher property tax burdens. As a percentage of total revenues, however, there was no clear pattern with respect to either intergovernmental aid or property taxes among urban and rural counties.

Urban and rural counties also showed significantly different demographic patterns, with the most consistent differences appearing in per capita personal income levels, where income levels were consistently lower among rural counties. Rural counties also showed more population growth compared to urban counties. The percentage of population over 65 years of age was relatively high for both the urban and rural extremes, although slightly higher for the most rural counties. There was no clear pattern among the states with respect to unemployment levels for urban and rural counties.

INTRODUCTION

Significant differences exist between urban and rural local governments in the United States -- differences in structure, in responsibilities, and in resources (6, 8, 12, 13). Generally, however, there is a greater understanding of urban governments than of their rural counterparts, due in part to the difficulty of studying large numbers of small and diverse units of government. This may be particularly troublesome in predominantly urban states where state policymakers often have relatively little understanding of the needs and capacities of rural local governments.

The purpose of this report is to conduct a preliminary analysis of the fiscal and demographic characteristics of urban and rural local governments in four Northeast states -- Maryland, Massachusetts, New York and Pennsylvania. The analysis includes both demographic and fiscal characteristics since the two are so closely related; that is, population characteristics have a major impact on the fiscal needs and capacities of local governments. This preliminary analysis utilizes secondary data sources (U.S. Bureau of Census data), and a classification system of urban and rural counties developed by the Economic Research Service of the U.S. Department of Agriculture. The utilization of an existing classification system and an easily obtained data base allowed us to develop fairly quickly an initial assessment of local government finances and demographics along an urban/rural dimension in the four states. If urban/rural differences appear in this initial assessment, then further research will be suggested in order to document and analyze these findings, and assess their implications for public policy. It is expected that subsequent research will require data sources and research designs specific to the governmental structures and policy concerns of the respective states.

DATA AND METHODOLOGY

Urban/Rural Classification System

The typology used in this analysis was developed by The Economic Research Service, USDA (8). The basic distinction made in this classification is that between metropolitan and nonmetropolitan counties. Counties are designated metropolitan if they are part of a standard metropolitan statistical area, defined by the U.S. Office of Management and Budget. The metropolitan counties range from core counties of over 1 million population to small metropolitan counties of less than 250,000 population. The ERS classification divides nonmetro counties into urbanized, less urbanized, and rural, based on population size and adjacency to metro areas. Page 4 shows the code. Table 1 in the Appendix shows the individual counties and their classification for the four Northeast States, using the most recent county codes developed in 1983. It should be noted that county classification codes were originally developed in 1973 and updated in 1983 to reflect changes in population during the decade. We use the earlier 1973 codes to classify county finances in 1972, and the more recent classification codes of 1983 to classify the 1982 county finance data.

As noted, adoption of an existing typology allowed rapid identification of rural and urban counties for this preliminary analysis. However, further research may benefit from one or more typologies that are specifically designed for analysis of local government finance issues in the four Northeast states. The particular USDA typology which was used measures urban influence according to population size and distance to metropolitan areas. A more recent typology developed at ERS classifies nonmetropolitan communities into several socioeconomic types, in order to evaluate the growing diversity in rural America (15).

The fiscal capacity of local governments is also a critical variable in any fiscal analysis. Fiscal, or tax, capacity measures the economic resources available to government. Depending on the approach taken, such a measure may include the totality available for taxation, or restrict itself to that which a government actually taxes (2A). A typology should probably also be designed to address specific policy issues. In Maryland there is interest in the impact of service sector employment on local economies. In this case, a typology which differentiates counties according to change in service sector employment would be most useful.

Unit of Analysis

Local government finance data are aggregated to the county level, and include all local governments in a county: municipalities, townships, special districts, school districts, and county government. This level of aggregation was used for several reasons. First, local government responsibilities varied significantly both within and among the four states. In Massachusetts school finances are a major responsibility of regional school districts in rural areas, while they are the responsibility of cities and towns in urban areas. By focussing on total local government finances it was possible to treat school and other finances in a consistent way in urban and rural areas in all four states. Second, it was thus possible to maintain a common unit of analysis among the four Northeast states, since it was not known whether the level or structure of government would affect revenue or expenditure patterns. For example, Massachusetts has a strong township government and New York a strong county government.

URBAN-RURAL CONTINUUM CODE

Metropolitan Counties

Code

0 Central counties of metropolitan areas of 1 million population or more

1 Fringe counties of metropolitan areas of 1 million population

2 Counties in metropolitan areas of 250 thousand to 1 million population

3 Counties in metropolitan areas of less than 250 thousand population

Nonmetropolitan Counties

4 Urban population of 20,000 or more, adjacent to a metropolitan area

5 Urban population of 20,000 or more, not adjacent to a metropolitan area

6 Urban population of less than 20,000, adjacent to a metropolitan area

7 Urban population of less than 20,000, not adjacent to a metropolitan area

8 Completely rural, adjacent to a metropolitan area

9 Completely rural, not adjacent to a metropolitan area

Notes:
Residents are classified as "urban" if they live in an incorporated or unincorporated place or township of 2500 or more inhabitants. Adjacent counties are those that share a common boundary with a metropolitan county. Codes were prepared in Economic Development Division, Economic Research Service, USDA. County codes for Maryland, Massachusetts, New York and Pennsylvania for 1973 and 1983 were supplied by Rick Reeder, Economist, State and Local Government Section, USDA-ERS-ARED.

These two levels of government in two different states have a great number of differences--in responsibilities and service provision characteristics such as size of geographic area served, among other things. Aggregating the level of analysis to total local government finances allowed us to minimize those differences.*

However, future research should focus on those units of government which are appropriate to the policy issues of concern. For example, key finance issues in Maryland are a rapid growth in counties and its consequences for infrastructure and education services.

Data Sources

Census of Governments for 1972 and 1982 was chosen as a secondary data source most comprehensive and reliable for local government finance data. Collins and Perkinson note that there are problems with data for small and rural municipalities (5). Communities under 2,500 population are not required to submit as comprehensive a finance report as the larger communities. As a result, there are less detailed finance data for capital expenditures and departmental expenditures. In order to ensure reliable and comparable finance data for all municipalities, we limited the variables to the following, presented per capita:

--Total general revenues
  --Property tax revenues
  --Intergovernmental aid

--Total direct general expenditures
  --School expenditures
  --Highway expenditures

*It should be noted that, even at this level of aggregation, there remain differences in state and local government responsibilities among the four states. For example, welfare expenditures are a state responsibility in Massachusetts and a municipal responsibility in New York. This probably explains, in part, why local government expenditure levels are consistently higher in New York.

Data are presented for the years 1972 and 1982. The data use unweighted averages for total local government finances within county area.

(Source: U.S. Bureau of the Census, Census of Governments, "Governmental Finances", 1972 and 1982)

The following demographic data are presented:

--Personal income per capita: 1981
--Change in population: 1970-80
--Percent population over 65: 1980
--Percent unemployment: 1980

(Data Source: U.S. Bureau of the Census, County and City Data Book, 1983)

DIFFERENCES IN LOCAL GOVERNMENT RESPONSIBILITY

Local governments are characteristically diverse in the number and type of services provided. Any fiscal analysis of local government must ensure that the local governments observed share a common level of responsibility, in order to ensure that variations in fiscal patterns do not simply reflect variations in local government responsibilities. In order to maintain consistency within each state, as noted earlier, we aggregated the data, to total government activity within counties. We knew, for instance, that in Massachusetts regional school districts had a major education responsibility in rural counties, but this responsibility was the responsibility of cities in urban counties. Aggregating the data to the county level ensured that these varying levels of responsibility were treated in a comparable way.

However, there remain variations in responsibility between local and state governments in the four states. Table 1 shows that in New York, local government expenditures account for 78 percent of total state and local expenditures. At the other end of the spectrum is Pennsylvania where local government expenditures account for only 55 percent of total state and local expenditures. It is quite likely that local governments provide more services in New York than in Pennsylvania. One would therefore expect consistently higher local government expenditure levels in New York State, and this is the case, as the following section on expenditures will show. However, there may also be varying impacts on urban/rural expenditure patterns as well, when local government services vary among the four states. For example, in Pennsylvania transportation (in this case, roads and highways) is primarily a state responsibilty: Table 1 shows that 72 percent of transportation expenditures were made at the state level. In New York, by comparison, only 39 percent of transportation expenditures

TABLE 1

EXPENDITURES OF STATE AND LOCAL GOVERNMENT,
BY LEVEL OF GOVERNMENT, 1976-77

	State and Local Government Expenditures*				
		State		Local	
	Total	Dollars	Percent Total	Dollars	Percent Total
MARYLAND					
Total Expenditures	$ 5,907	$2,063	.35	$ 3,844	.65
Education	2,336	515	.22	1,820	.78
Transportation	458	210	.46	248	.54
Public Welfare	588	320	.54	268	.46
MASSACHUSETTS					
Total Expenditures	$ 8,197	$3,376	.41	$ 4,821	.59
Education	2,791	511	.18	2,280	.82
Transportation	516	291	.56	225	.44
Public Welfare	1,366	1,331	.97	35	.03
NEW YORK					
Total Expenditures	$31,329	$6,904	.22	$24,425	.78
Education	9,738	1,654	.17	8,085	.83
Transportation	1,463	564	.39	899	.61
Public Welfare	5,342	115	.02	5,228	.98
PENNSYLVANIA					
Total Expenditures	$13,847	$6,181	.45	$ 7,666	.55
Education	4,877	1,136	.23	3,741	.77
Transportation	1,145	824	.72	320	.28
Public Welfare	2,363	2,091	.88	272	.12

SOURCE: Governmental Finances, Census of Governments, U.S. Bureau of Census, 1977.

*(Millions of dollars)

occurred at the state level, and the remaining 61 percent at the local level. Researchers have found that production costs for some types of roads and highways are highest at the urban and rural extremes: per capita costs often show a curvilinear pattern when arrayed by population size of the producing unit (7). Thus, the variations in local government responsibilities in the four Northeast states undoubtedly impact on expenditure patterns. The section on expenditures which follows shows that Pennsylvania local governments expenditures follow a declining slope, while New York local government expenditure patterns are curvilinear. This may well be related to the variations in transportation services.

Clearly, future research on local government finances in these states will require that responsibilities of urban and rural governments be treated in a comparable way. And as earlier discussed, variations in fiscal capacities of local governments must also be treated in a comparable way. Without such treatment urban and rural comparisons cannot be effectively developed. In view of these problems, it is interesting that in the following sections on expenditures and revenues, clear differences emerge between urban and rural counties in all four states. Even at this preliminary stage, major differences appear between the resources and needs of urban and rural local governments.

LOCAL GOVERNMENT FINANCES: EXPENDITURES

Three expenditure variables are analyzed on a per capita basis: total direct general expenditures, education expenditures, and highway expenditures. Education expenditures and highway expenditures are also analyzed as a percentage of total direct general expenditures.

EXPENDITURE LEVELS

Total direct general expenditures are shown in Figures 1A through 1D. Direct general expenditures include capital outlays and general purpose operating costs but exclude special purpose municipal enterprises, such as utilities.

When analyzed by an urban/rural classification scheme, local government expenditure levels for urban and rural county types differ greatly. The patterns of expenditures vary somewhat among the four states. Maryland and Pennsylvania both show sharply higher expenditure levels in the most urban counties (Type 0), compared to all other counties (Types 1 through 9). New York shows a U-shaped curve, where per capita expenditures decline from Type 0 counties to Type 3 counties, and then increase again for Type 4 through Type 8 counties. However, expenditure levels remain somewhat lower for the Type 4 through 8 counties. In Massachusetts, the pattern is somewhat misleading because the most rural counties in the Table (Types 7 and 9) are actually island resorts. The per capita data do not include a large summer population which is a significant source of both property tax and other revenues, as well as expenditure demands. If these two counties are omitted, the Massachusetts pattern shows a U-shaped pat-

FIGURE 1A

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS: 1982
MARYLAND

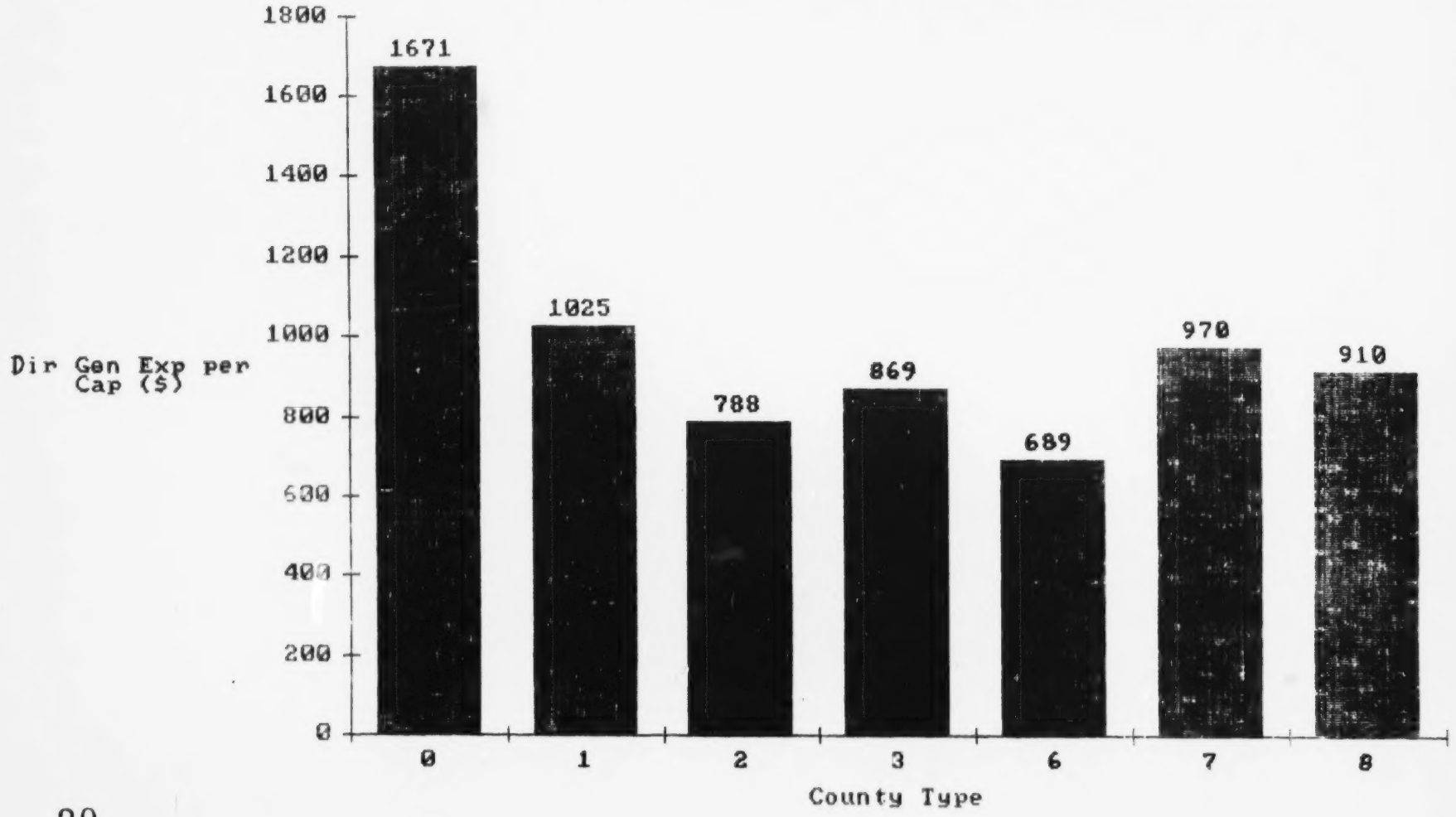

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FIGURE 1B

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS: 1982
MASSACHUSETTS

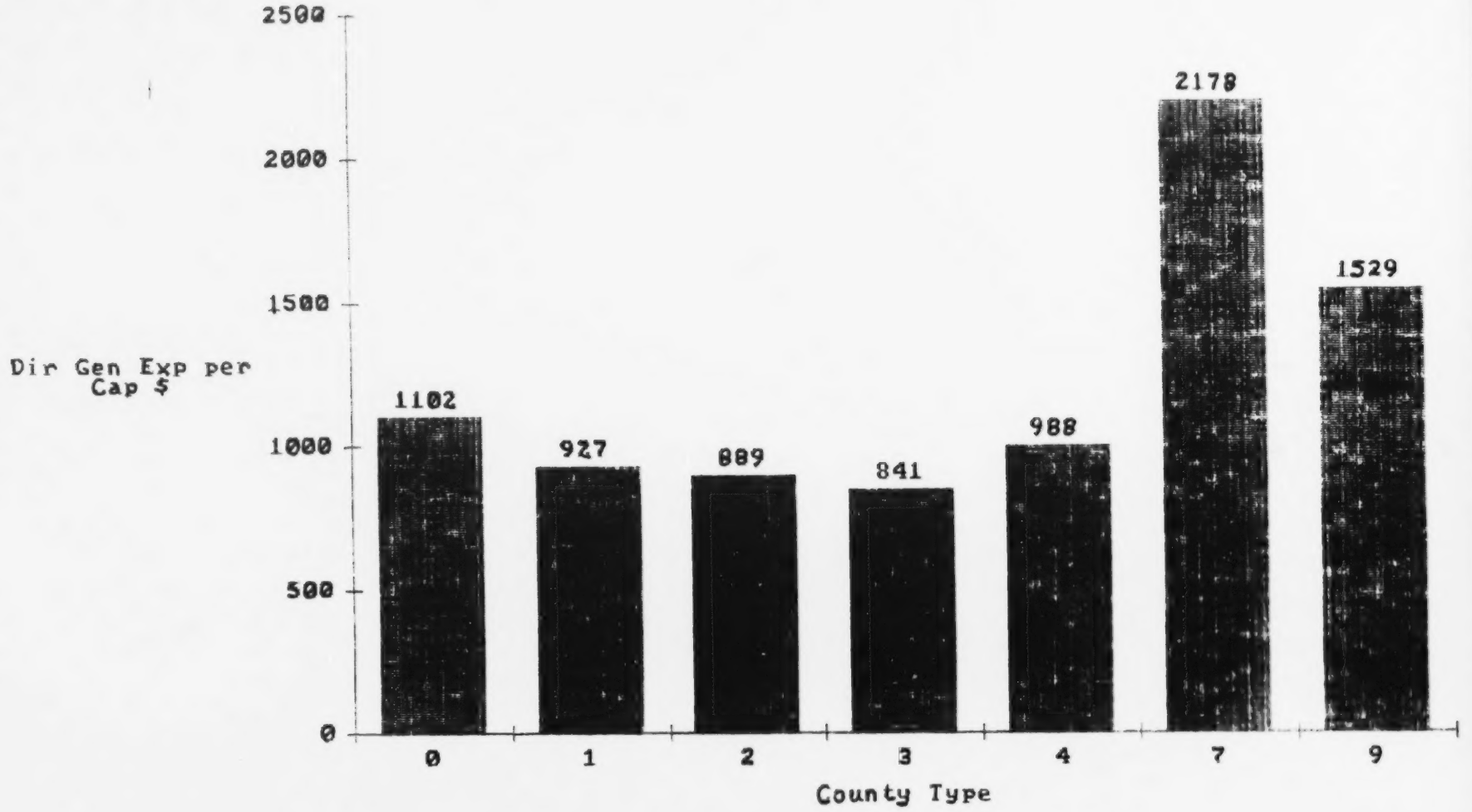

FIGURE 1C

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS: 1982
NEW YORK

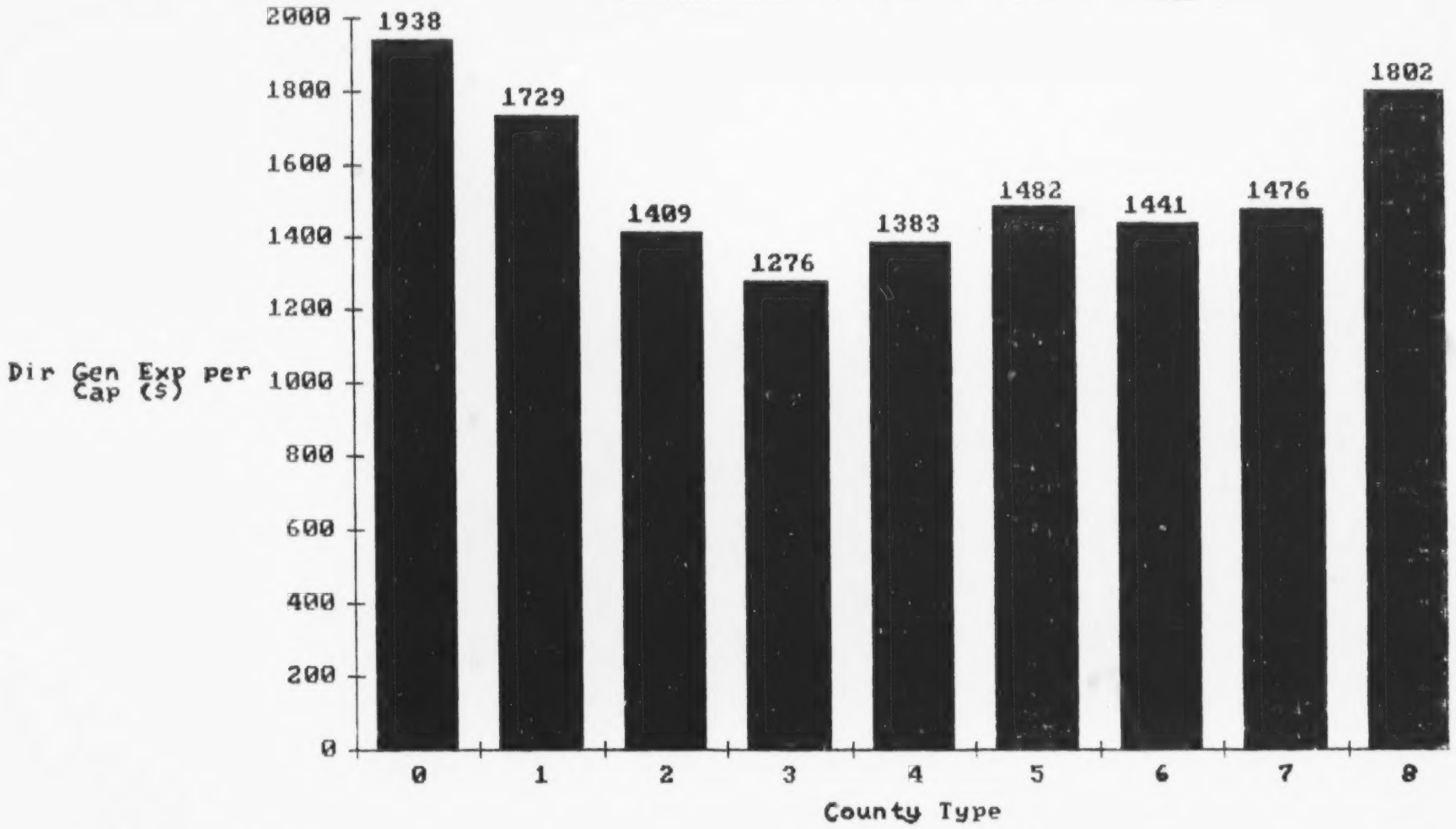

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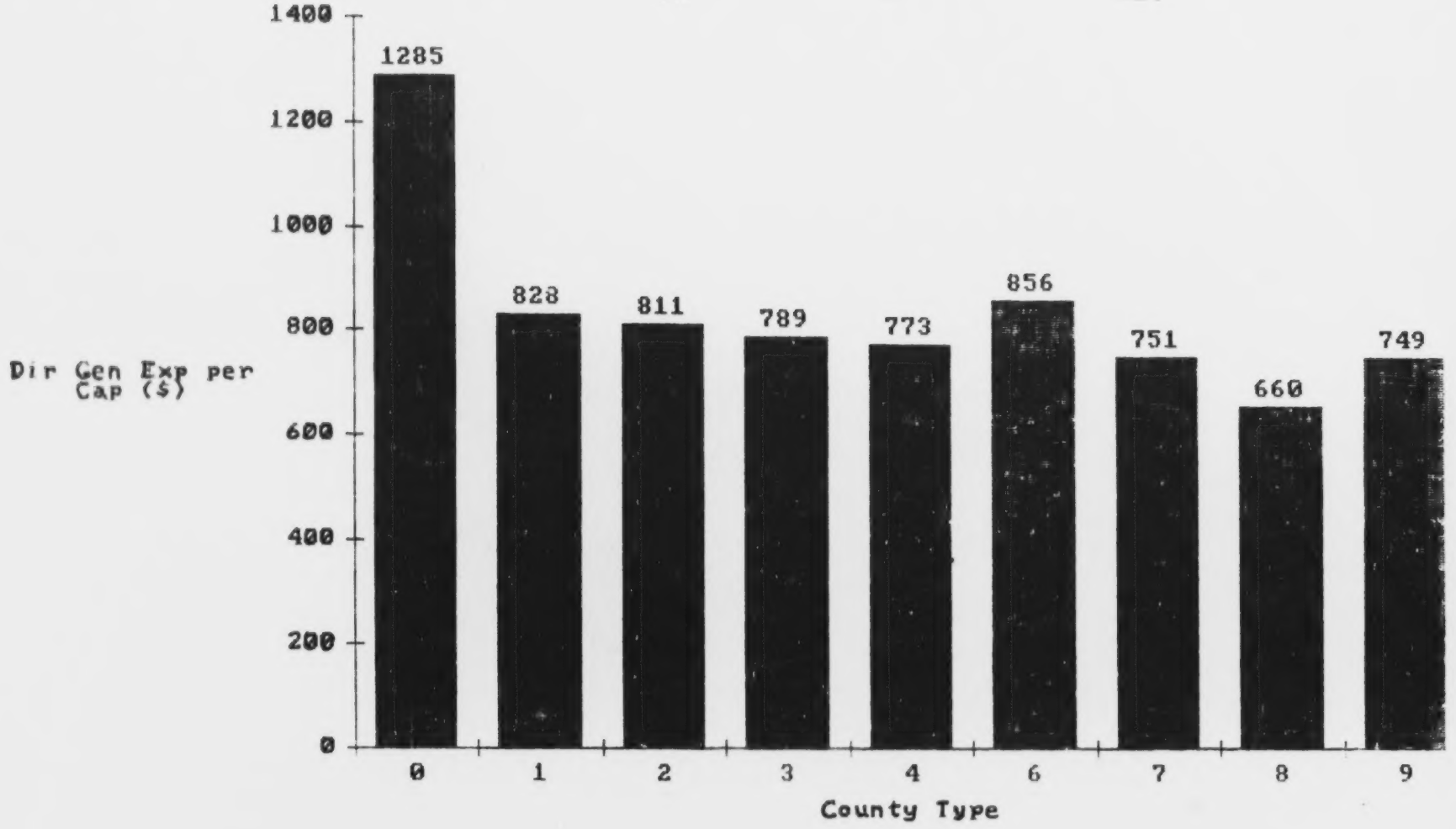
FIGURE 1D

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS: 1982
PENNSYLVANIA



tern where expenditures decline from county types 0 to 3, and then rise again in county type 4. Here again, expenditures remain slightly lower for the type 4 counties, compared to the type 0 counties.

It should be noted that there is often significant variation around the mean shown in these charts. Table 2 in the Appendix shows the amount of variation in local government expenditures among individual counties. The variation tends to be greatest in the most urban and most rural counties. In New York and Massachusetts, the large variation in the Type 0 counties is caused by the inclusion of counties housing the largest metropolitan centers, New York City and Boston, with other urban counties. Expenditures of these cities are much higher than other cities in the Type 0 counties.

The large variation in expenditures for the most rural counties in the four states shows that rural counties may have very different fiscal characteristics. In Massachusetts we have noted that County Types 7 and 9 are island resorts. County Type 4 contains one rural county based on an agricultural economy, and one rural county which has a tourism/resort economy. Future research should distinguish between these two types of economies because they clearly have important consequences for the fiscal capacities of local governments. A typology recently developed at USDA classifies rural counties by economies, and this approach should be pursued further in the Northeast states (15).

Both the declining slope of local government expenditures found in Maryland and Pennsylvania, and the curvilinear pattern shown in New York and Massachusetts, are consistent with public finance theory. Generally, both very large and very small units of government may show higher per

capita expenditure levels--large governments because of such factors as higher service demands and aging infrastructure for example, and small governments because of diseconomies of size (1, 2, 7, 9, 10).

Thus, the U-shaped curve found in New York and Massachusetts may reflect higher production costs for local governments at both the urban and rural extremes. However, the relatively high expenditure levels characteristics of the most urban (Type 0) counties in all four Northeast states likely also reflects a wider range and higher level of services. Urban local governments generally provide a wider array of services than do their rural counterparts (16), such as public water and sewer systems, recreation and transportation. This is a way in which the "comparable services" issue is violated. This is discussed further in the section, Expenditure Categories.

CHANGES IN LOCAL GOVERNMENT EXPENDITURES: 1972 TO 1982

Figure 2A through 2D show direct general expenditures in 1972 and 1982 in constant dollars (base year, 1972). The figures indicate that expenditure patterns of urban and rural local governments did not change significantly between 1972 and 1982. In both 1972 and 1982, for example, Maryland and Pennsylvania show significantly higher expenditure levels in Type 0 counties compared to all other counties. In New York and Massachusetts, a U-shaped curve is shown in both 1972 and 1982. (The high expenditure level for county type 8 in New York in 1972 appears to be a one-time occurrence associated with education expenditures.)

Local governments in all county types - both urban and rural - generally show lower expenditure levels in 1982 than in 1972, in constant

FIGURE 2A

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)
MARYLAND

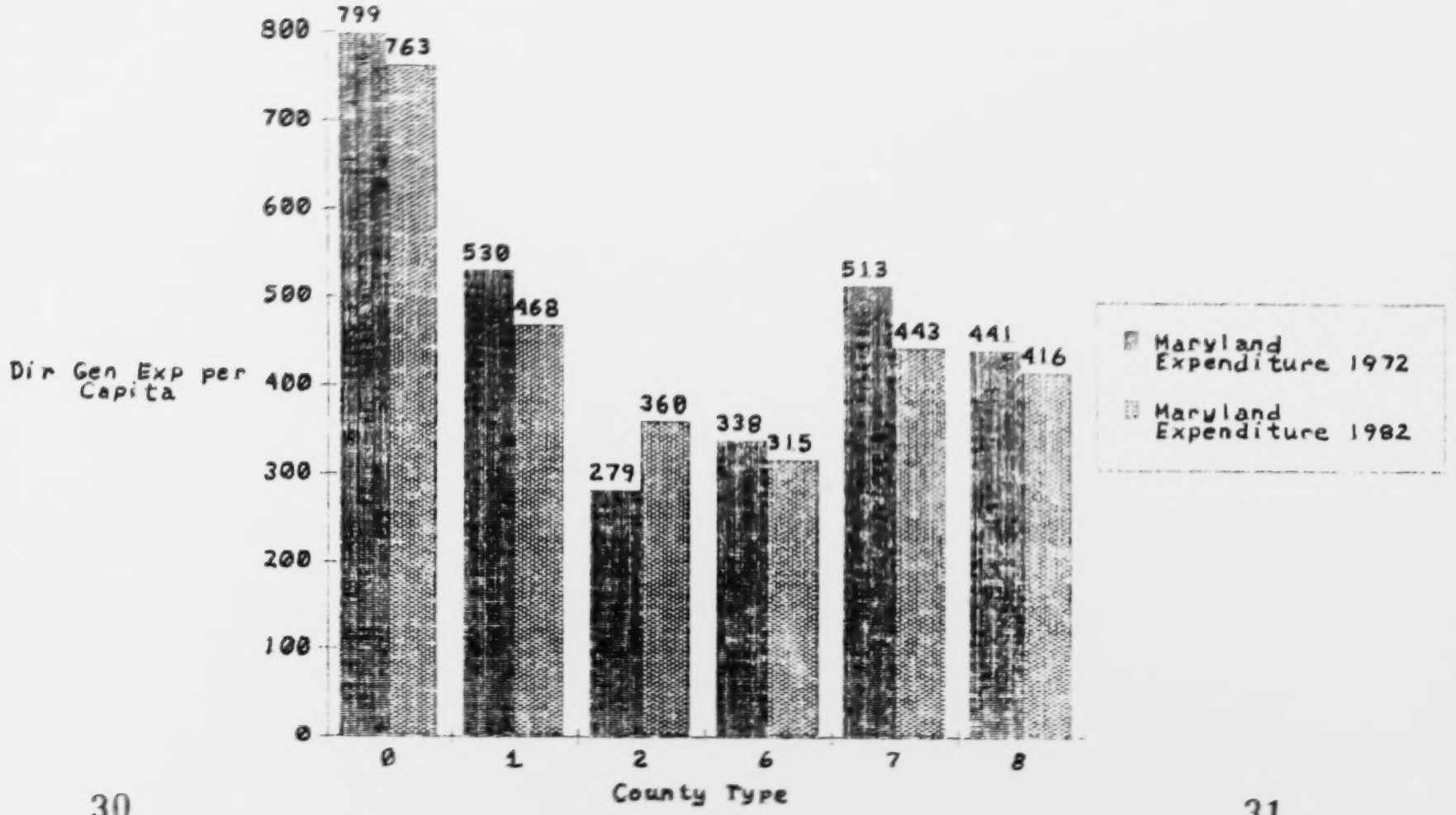


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FIGURE 2B

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)
MASSACHUSETTS

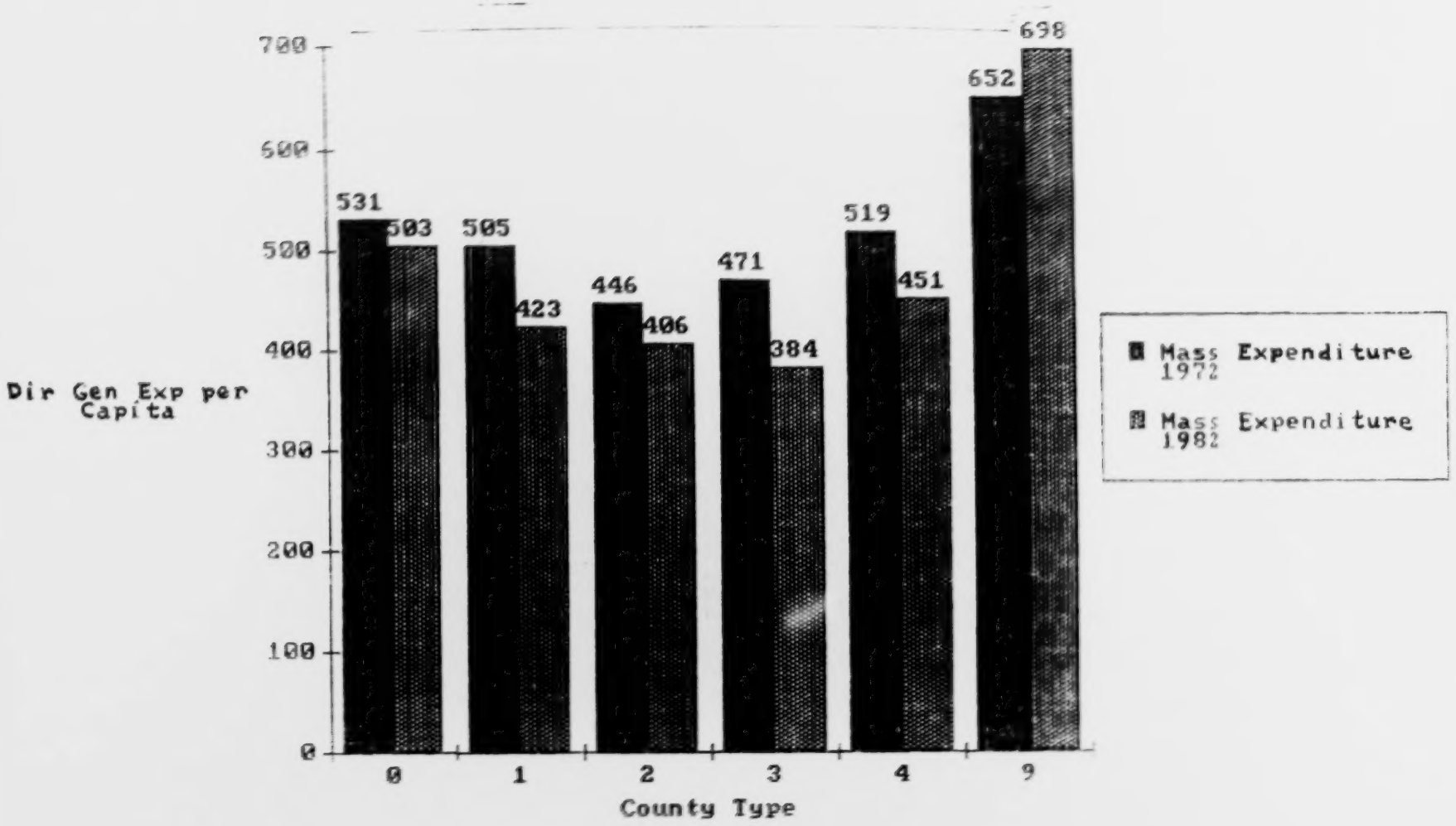

FIGURE 2C

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)

NEW YORK

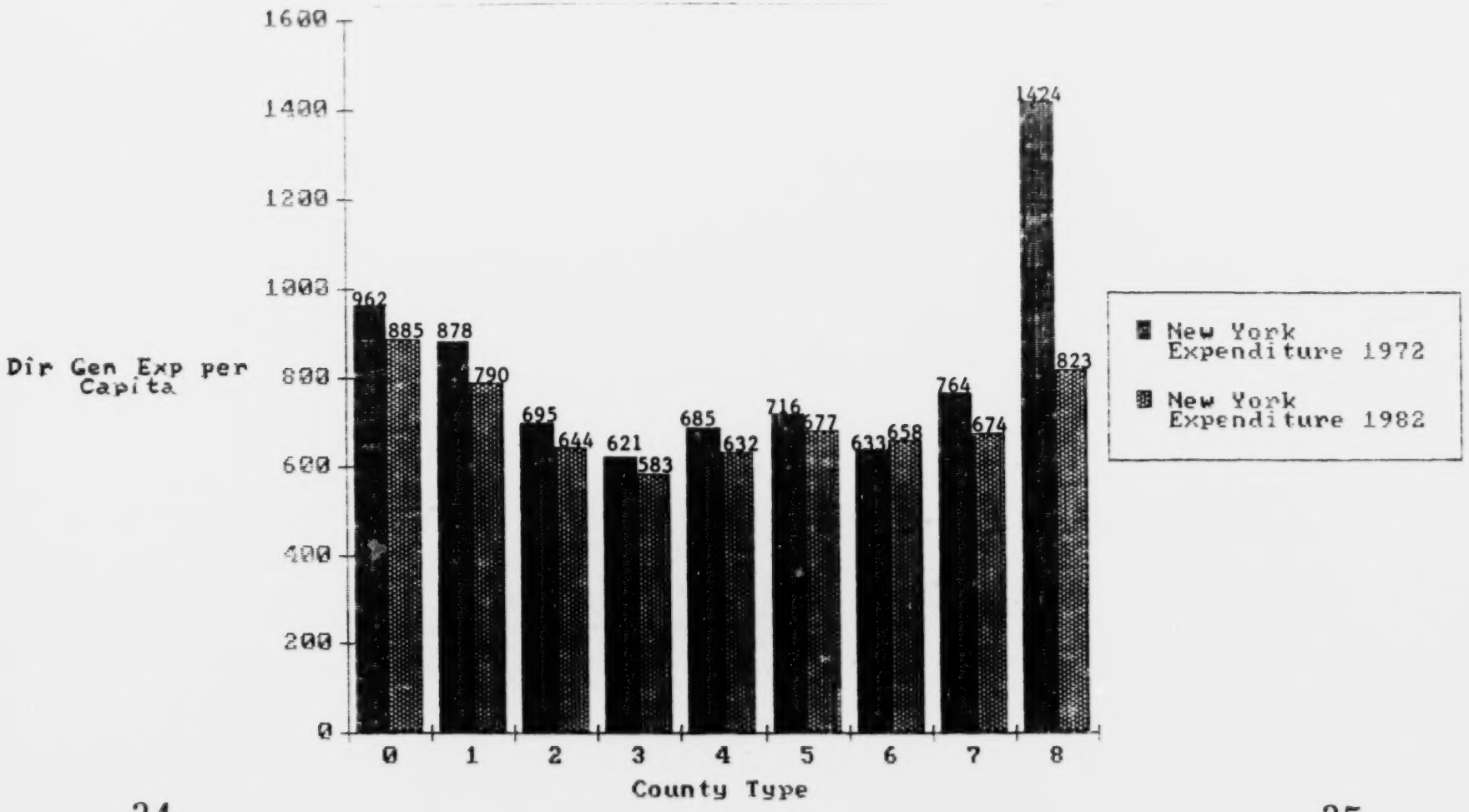

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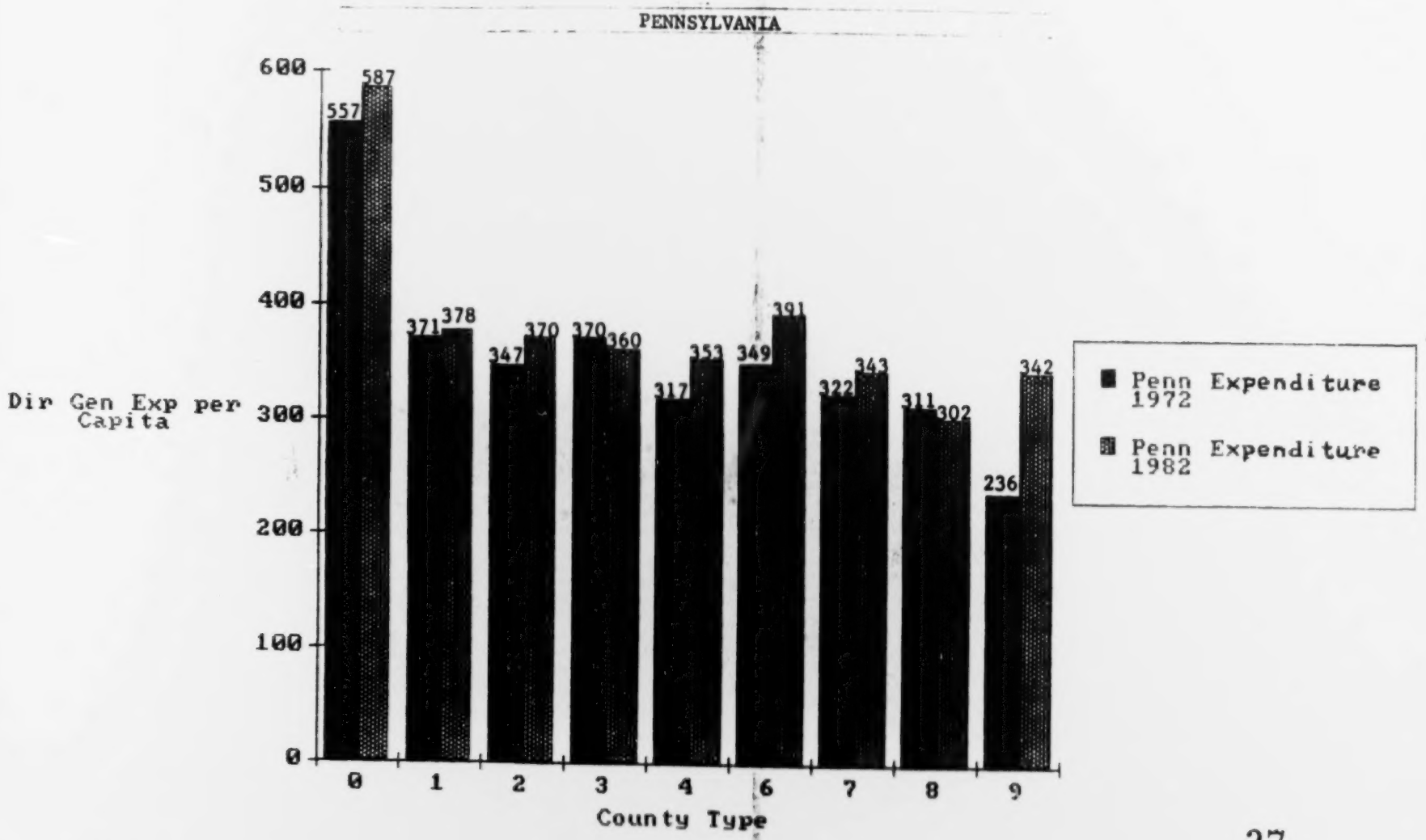
FIGURE 2D

AVERAGE LOCAL GOVERNMENT EXPENDITURES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)



dollars with the exception of Pennsylvania. In Pennsylvania local government in both urban and rural counties generally show higher expenditure levels in 1982 than in 1972.

EXPENDITURE CATEGORIES

Two major local government expenditure categories are analyzed: total education and total highway. Expenditures include capital outlays because operating expenditure data were not available for towns under 2,500 population. The expenditures are analyzed in Table 2 on a per capita basis and as a percentage of total direct general expenditures.

EDUCATION

Education Expenditures Per Capita

Per capita education expenditures (Table 2) show a similar pattern in Maryland, Massachusetts, and New York. In each of these states, per capita education expenditures are relatively low in the most urban (Type 0) counties. Per capita education expenditures then rise in Type 1 counties, and show a U-shaped curve from Type 1 to the most rural counties in each state. The U-shaped curve probably reflects several factors, among them size diseconomies in both urban and rural counties, as well as differences in student demographics and perhaps in the array of services. The low per capita expenditure level found in Type 0 counties is interesting, given that education costs per student in urban areas are often relatively high (7), and may reflect different proportions of school age children in urban vs rural communities.

Pennsylvania shows no clear differences in per capita education expenditures among the different county types. However, aggregation of school finance data to the county level may not be appropriate for Pennsylvania.

TABLE 2

HIGHWAY AND EDUCATION EXPENDITURES
FOR URBAN AND RURAL LOCAL GOVERNMENTS: 1982

County Type	Highway Expenditures Per Capita ($)	Highway Expenditures % Total Expend.	Education Expenditures Per Capita ($)	Education Expenditures % Total Expend.	Highway and Educ. Expend. as Percent of Total Expenditures
			MARYLAND		
0	302	.18	437	.26	.44
1	58	.06	583	.57	.63
2	15	.02	567	.72	.74
3	72	.08	510	.59	.67
6	14	.02	453	.66	.68
7	91	.09	488	.50	.59
8	150	.16	556	.61	.77
			MASSACHUSETTS		
0	43	.04	463	.42	.46
1	48	.05	481	.52	.57
2	41	.05	421	.47	.52
3	68	.08	432	.51	.59
4	75	.08	459	.46	.54
7	310	.14	609	.28	.42
9	142	.09	568	.37	.46
			NEW YORK		
0	72	.04	534	.28	.32
1	85	.05	815	.47	.52
2	116	.08	656	.47	.55
3	83	.06	545	.43	.49
4	137	.10	649	.47	.57
5	140	.09	676	.46	.55
6	194	.13	627	.43	.56
7	152	.10	662	.45	.55
8	365	.20	758	.42	.62
			PENNSYLVANIA		
0	48	.04	430	.33	.37
1	37	.04	452	.55	.59
2	41	.05	429	.53	.58
3	41	.05	446	.56	.61
4	40	.05	401	.52	.57
6	46	.05	460	.54	.59
7	47	.06	424	.56	.62
8	56	.08	437	.66	.74
9	62	.08	498	.67	.75

Alter and Moore, analyzing fiscal trends of school districts, found differences between urban and rural school districts over the period 1970-71 and 1976-77 (2A).

Education Expenditures as a Percentage of Total Direct Expenditures

When education expenditures are analyzed as a percentage of total direct expenditures, in Table 2, the most urban, Type 0, counties vary greatly from all other county types. In Maryland, New York and Pennsylvania the percent of total expenditures devoted to education in the most urban counties (Type 0) was approximately half the level found in all other counties. For example, in Maryland education expenditures made up 26 percent of total expenditures in Type 0 counties; in all other Maryland counties education expenditures ranged from 50 to 72 percent of total budget. Education expenditures generally are less important as a percentage of total local government expenditures in the most urban counties. This was also true, as noted above, for per capita expenditures in Maryland, Massachusetts and New York.

As a percentage of total budget, education expenditures in Massachusetts showed less disparity between the most urban, Type 0, counties and all other county types (if the two island resort counties are again omitted). Education expenditures made up 42 percent of total expenditures in Type 0 counties, compared to an average of 50 percent for Types 1 through 4 counties. It should be noted that Massachusetts is a relatively urban State. Type 0 through type 3 counties are all metropolitan counties. If the type 7 and type 9 counties are omitted because of the difficulty of analyzing the data for island resort areas, then type 4 is the only county type remaining which can be considered rural, or nonmetropolitan, and this type is considered the most urbanized of the

nonmetropolitan counties in the classification or scheme. Thus, the data for Massachusetts tend to be representative of urban finance and demographic characteristics throughout the report.

HIGHWAYS

Highway Expenditures Per Capita

On a per capita basis, highway expenditures show a general upward slope for the more rural counties in Massachusetts and New York, shown in Table 2. This trend suggests that highway costs are often a greater burden for less densely populated rural communities. However, Pennsylvania and Maryland both show a U-shaped curve for highway expenditures, with higher levels in the most urban and most rural counties. Researchers studying the costs of highway construction and maintenance have found both upwardly sloping and U-shaped cost curves as well. Generally, the relationship between production costs and populations size varies according to the type of road construction (7). Clearly, further data is necessary to understand highway expenditure trends. One critical area for further research is the need to differentiate between capital and operating expenditures (operating expenditure data were not available for towns under 2,500 population). And a comparison of highway expenditures from 1972 to 1982 shows significant fluctuation. For example, per capita highway expenditures in Type 0 counties in Maryland were $302 in 1982 and $47 in 1972.

Highway Expenditures as a Percentage of Total Direct Expenditures

As a percentage of total direct expenditures, highway expenditures increased as counties became more rural. In Massachusetts, New York and Pennsylvania, the percentage of budget devoted to highways was generally twice as high in rural counties as in the more urban counties. This is consistent with the trends found in education expenditures, and suggests that expenditures of local governments in rural counties may be dominated

by a small number of basic services, compared to a larger array of services in urban centers.

Maryland showed a U-shaped curve, where the percentage of expenditures devoted to highways was two to three times higher in both urban (Type 0) and rural (Type 8) counties. As noted above, the relatively high expenditure levels in urban counties may reflect one-time capital outlays.

Combined Education and Highway Expenditures as Percentage of Budget

Taken together, education and highway expenditures dominate total local government expenditures in rural counties, in all four Northeast states. Combined education and highway expenditures ranged from 54 percent of total expenditures of the most rural counties in Massachusetts, to 77 percent of total expenditures for the most rural counties in Maryland. In urban counties, by comparison, combined education and highway costs ranged from 32 percent of total expenditures for Type 0 counties in New York, to 46 percent of total expenditures for Type 0 counties in Massachusetts. (As should be noted earlier, if the Type 7 and Type 9 counties in Massachusetts are omitted because of the statistical anomalies of these island resort counties, Massachusetts becomes a predominantly urban state, with only two counties included as Type 4 counties and the remaining 8 counties treated as urban counties, Type 0 to Type 3.)

LOCAL GOVERNMENT FINANCES: REVENUES

The following revenue variables are analyzed: total general revenues per capita, property taxes per capita, and intergovernmental revenues per capita. General revenues exclude bond proceeds and enterprise revenues such as municipal utilities. Property taxes and intergovernmental revenues are also analyzed as a percentage of total general revenues.

REVENUE LEVELS

Figures 3A through 3D show local government general revenues per capita in urban and rural counties in the four Northeast states. In general, revenues show the same pattern as found for expenditures. In Maryland and Pennsylvania, local government revenues per capita are sharply higher in the most urban (Type 0) counties. In Massachusetts and New York, per capita revenues show a somewhat U-shaped curve, where revenue levels decline from the most urban counties (Type 0) and then increase as counties approach the rural extremes, although they do not reach the revenue levels of the most urban counties (discounting the island resort counties Type 7 and Type 9 in Massachusetts).

These data trends show that, generally speaking, local governments in urban counties have greater resources than do local governments in rural counties, even when revenue levels are adjusted for population.

However, it should be noted that there is a good deal of variation around the mean for individual counties within the county types shown in Figures 3A through 3D. This is shown in Table 3 in the Appendix, Variation in Local Government Revenues. The variation appears greatest for the most urban and most rural counties, for example, county types 1 and 7 in Maryland; type 0 in Massachusetts; and types 0 and 8 in New York. As noted

FIGURE 3A

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS: 1982
MARYLAND

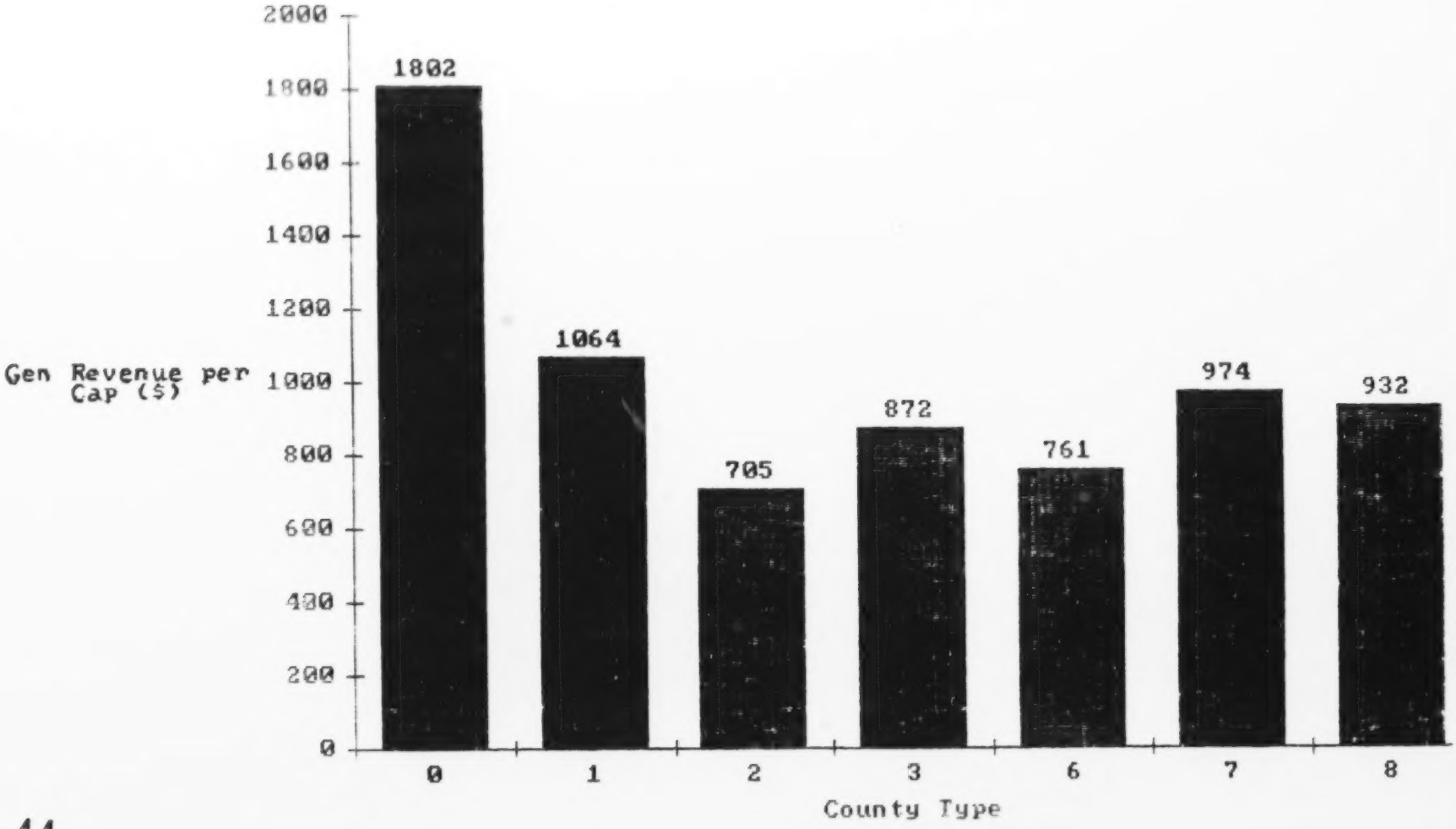


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FIGURE 3B

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS: 1982
MASSACHUSETTS

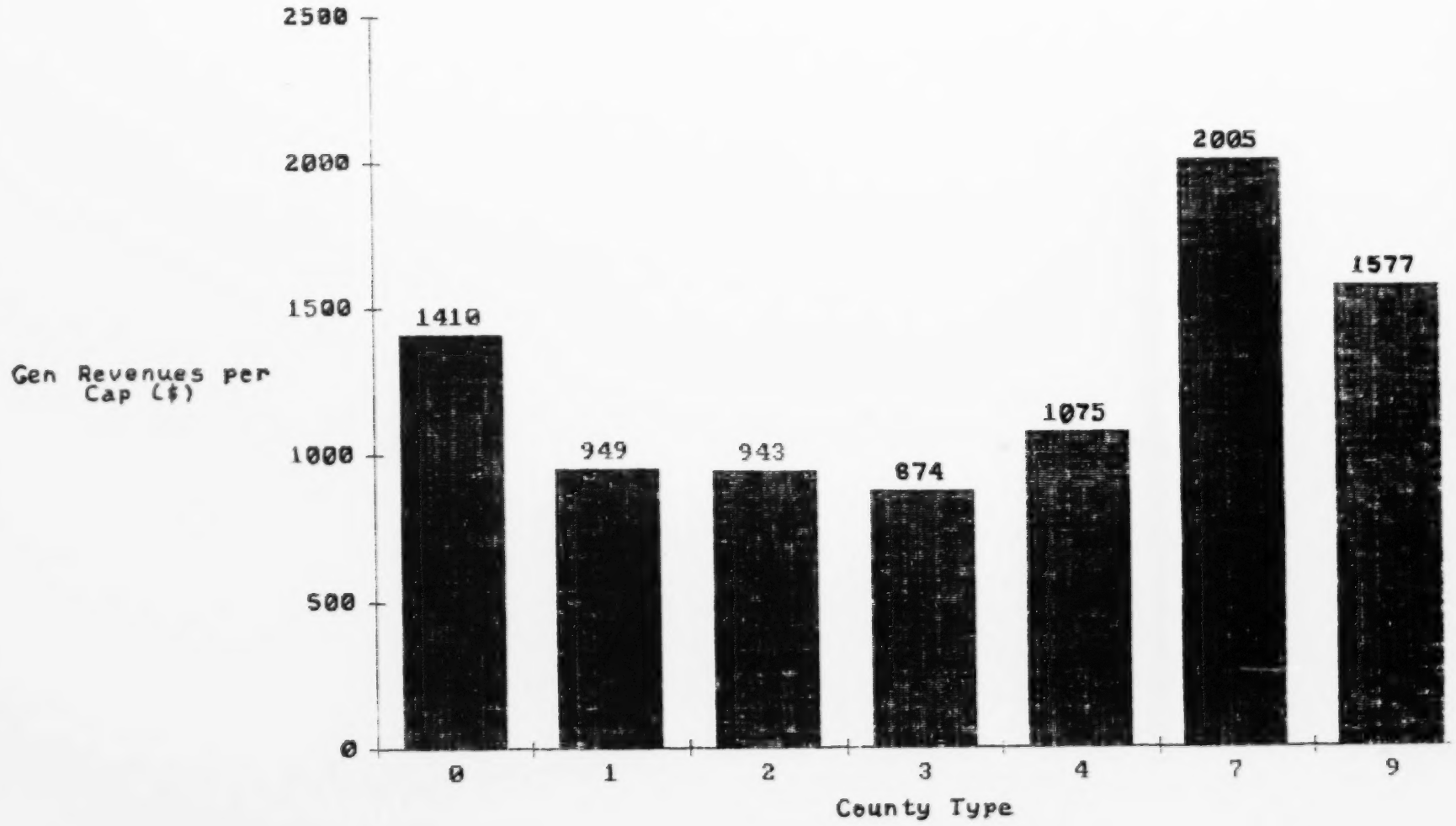


FIGURE 3C

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS: 1982
NEW YORK

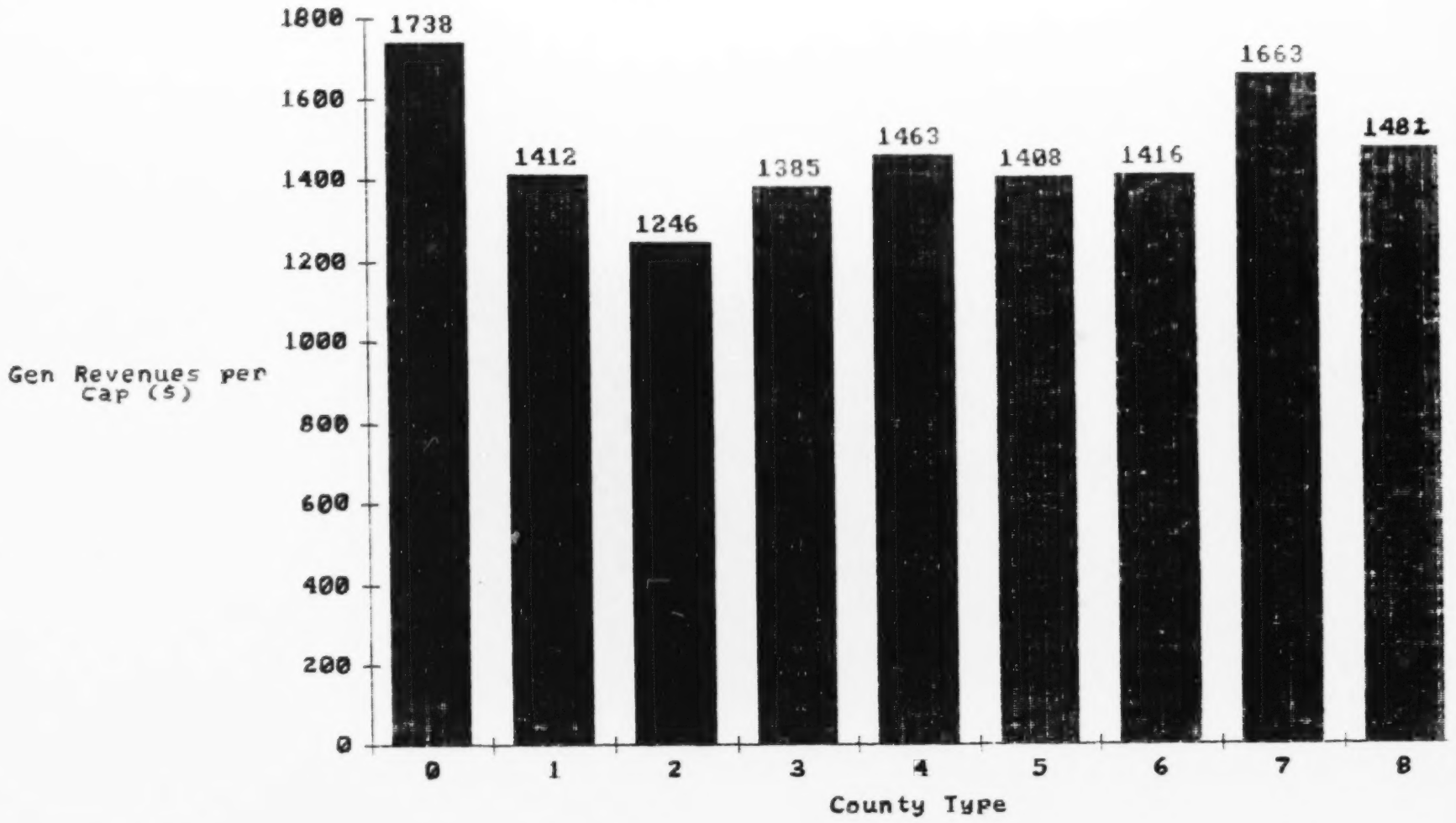
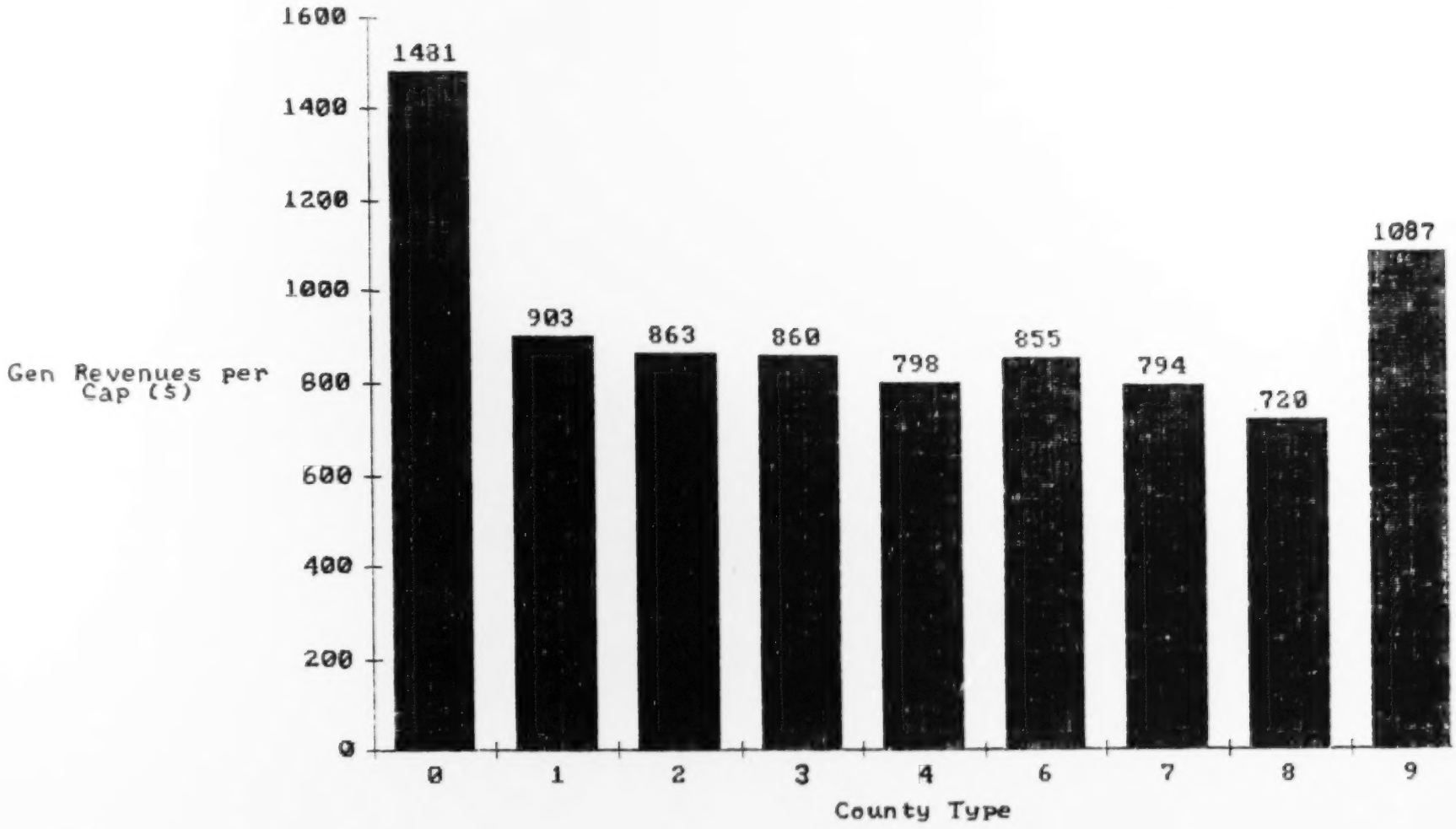


FIGURE 3D

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS: 1982
PENNSYLVANIA



in the discussion on expenditures, most of the variation in county type 0 in New York and Massachusetts is caused by the inclusion of counties housing two large metropolitan centers—New York City and Boston—with other urban counties in the two states. These two counties are statistical outliers relative to the remaining Type 0 counties, which suggests that they should be treated differently in a future classification system. The variation which occurs in some very rural counties, for example, Type 7 in Maryland, also suggests that further attention needs to be paid to characteristics of rural counties, in addition to population size and geographic location. As noted in the discussion on expenditures, future research should consider the development of a classification system which reflects economic and fiscal characteristics of rural areas and urban areas.

CHANGES IN LOCAL GOVERNMENT REVENUES: 1972 to 1982

Figures 4A through 4D show average local government revenues among the county types in the four Northeast states for 1972 and 1982, adjusted for inflation. Variation in revenue level between urban and rural counties is similar in both 1972 and 1982. Per capita revenues for the most urban, type 0, counties are consistently higher than in most other counties. Exceptions occur in Massachusetts, where type 9 island resort counties have higher revenue levels; in New York in 1972 where one type 8 county had extremely high property tax revenues; and in Pennsylvania in 1982 where the type 9 county had sharply higher revenues.

We noted in the earlier discussion of expenditure changes from 1972 to 1982 that all local governments, both urban and rural, showed consistently lower levels of expenditures in 1982 after adjustment for inflation. There is no consistent pattern to revenue changes, however. In some county areas, revenue levels increased from 1972 to 1982, while in other county

FIGURE 4A

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)
MARYLAND

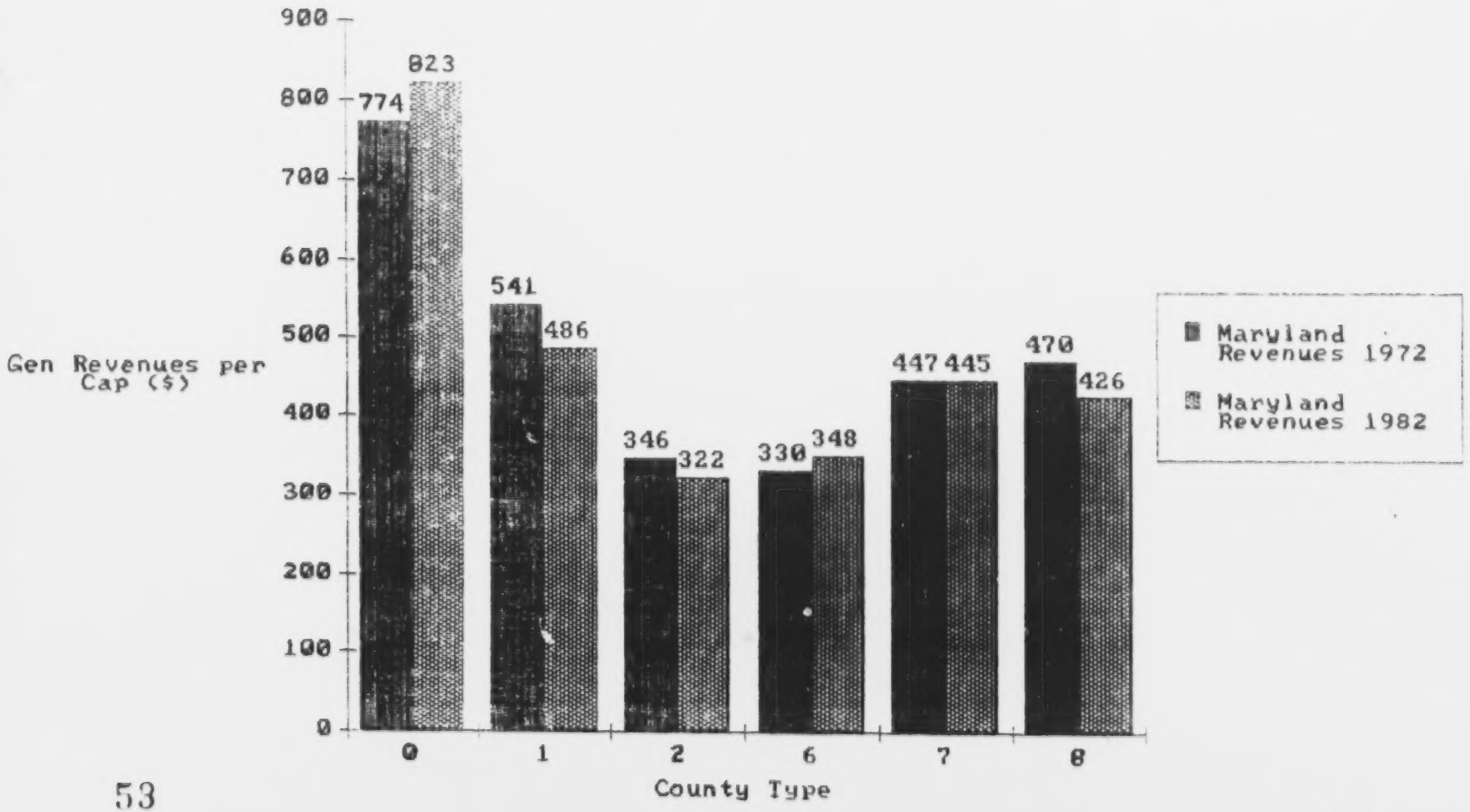


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FIGURE 4B

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)
MASSACHUSETTS

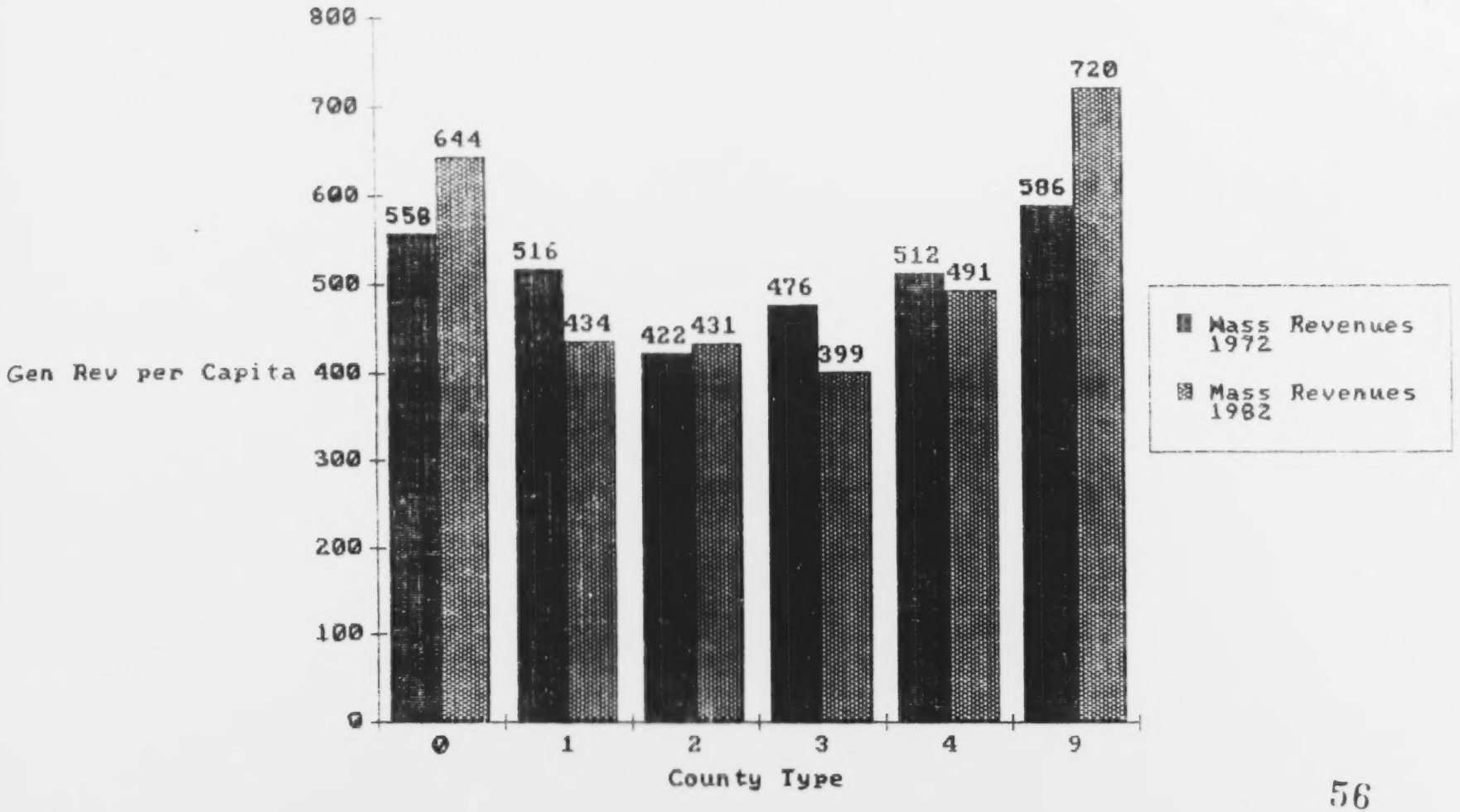

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FIGURE 4C

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS:
1972 and 1982 (CONSTANT DOLLARS)
NEW YORK

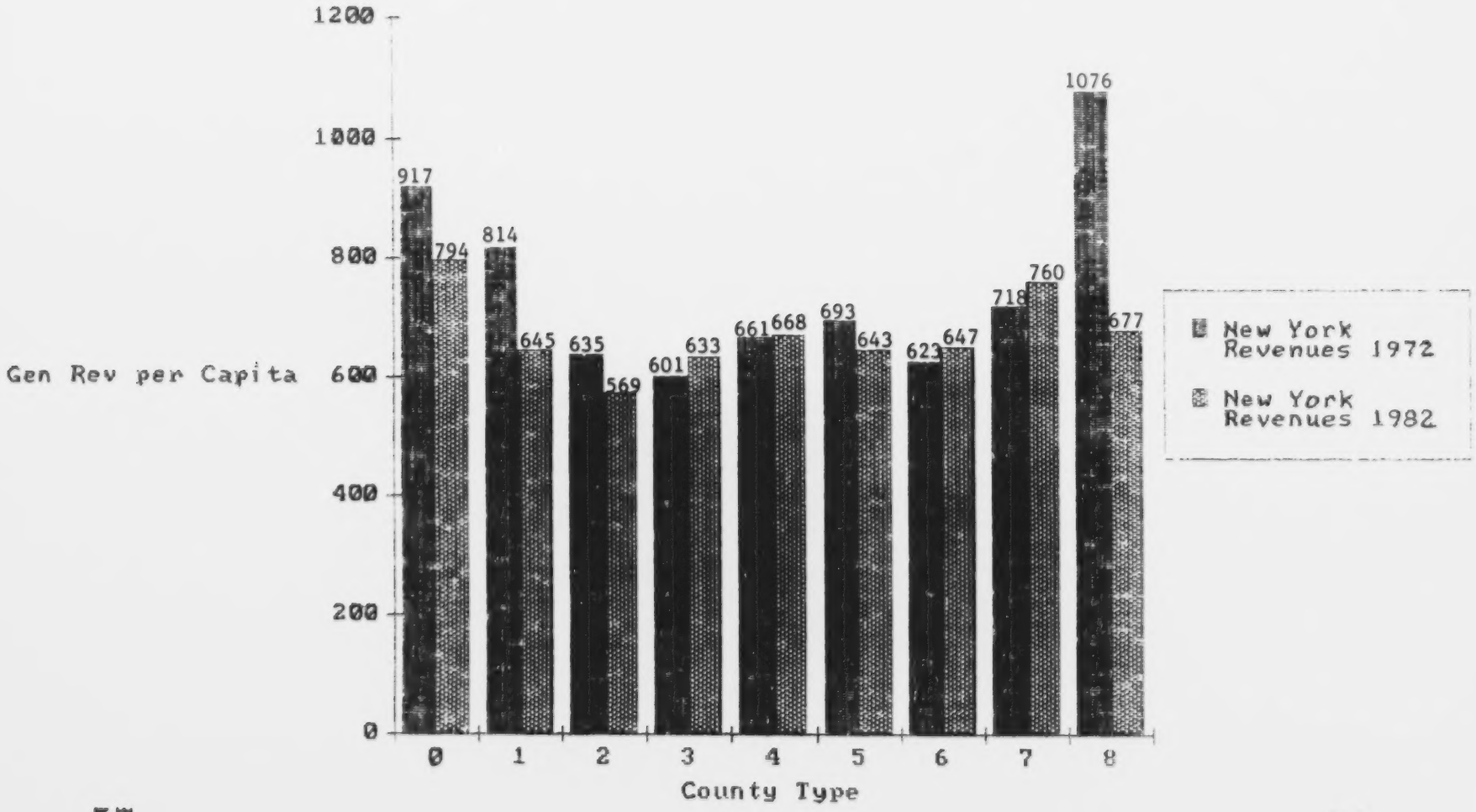
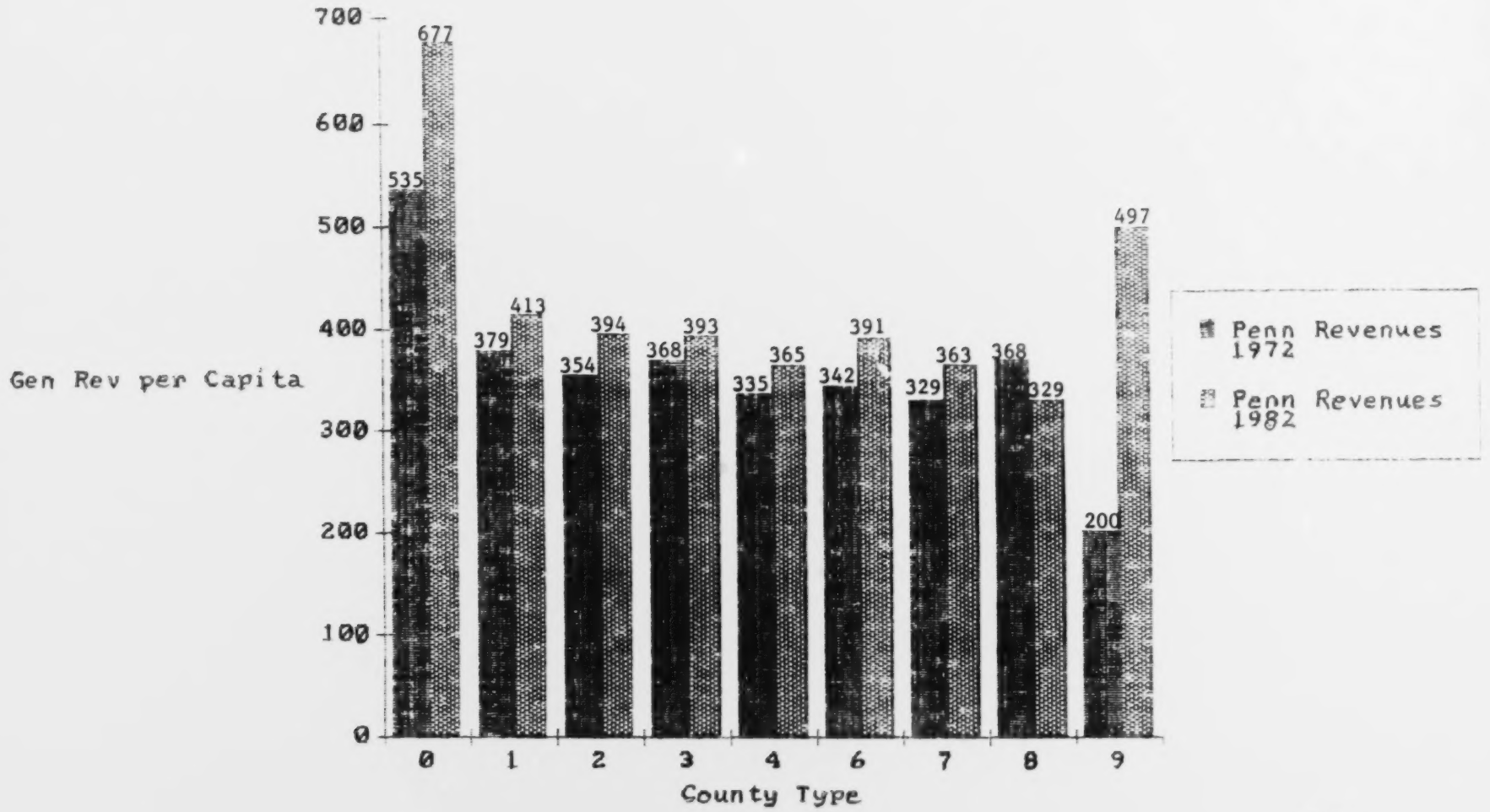


FIGURE 4D

AVERAGE LOCAL GOVERNMENT REVENUES FOR COUNTY AREAS:
1972 AND 1982 (CONSTANT DOLLARS)
PENNSYLVANIA



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areas revenue levels decreased in constant dollars. However, there is no apparent relationship to the degree of urbanness or rurality of the county areas.

REVENUE PATTERNS

The two major local government revenue sources are property taxes and intergovernmental aid, which account for 50 to 70 percent of total local government general revenues in the four Northeast states. Table 3 analyzes these revenues on a per capita basis and as a percentage of total general revenues.

INTERGOVERNMENTAL AID

Intergovernmental Aid Per Capita

Intergovernmental aid per capita is highest for the most urban (Type 0) counties in all four states. In Maryland, Massachusetts and New York intergovernmental aid per capita for Type 0 counties is about twice as high as for all other counties in those states. In Pennsylvania, intergovernmental aid per capita shows a U-shaped pattern although aid levels remain highest for the most urban (Type 0) counties.

Intergovernmental Aid as a Percentage of Total Revenues

When analyzed as a percentage of total revenues, no relationship was found between reliance on intergovernmental aid and county type, in any of the four Northeast states. The percentage of revenues accounted for by intergovernmental aid ranged from 23 percent in Type 4 counties in New York to 62 percent in Type 0 counties in Maryland. But there was no clear relationship to the degree of urbanness or rurality of the counties. It is possible that different local government types, such as municipalities or county governments, may show different relationships to state and federal government aid, and these relationships are hidden when

TABLE 3

INTERGOVERNMENTAL AID AND PROPERTY TAX REVENUES
FOR ALL LOCAL GOVERNMENTS IN URBAN AND RURAL COUNTIES: 1982

County Type	Intergovernmental Aid Per Capita ($)	Intergovernmental Aid Percent Total Rev.	Property Tax Revenues Per Capita ($)	Property Tax Revenues Percent Total Rev.
		MARYLAND		
0	1109	.62	300	.17
1	370	.35	325	.30
2	396	.56	196	.28
3	415	.48	196	.22
6	323	.42	216	.28
7	416	.43	298	.31
8	508	.54	226	.24
		MASSACHUSETTS		
0	632	.45	581	.41
1	361	.38	499	.53
2	442	.47	354	.38
3	350	.40	434	.50
4	330	.31	592	.55
7	419	.21	1156	.58
9	367	.23	958	.61
		NEW YORK		
0	949	.44	480	.22
1	596	.34	809	.47
2	657	.47	446	.32
3	559	.45	399	.32
4	676	.23	401	.25
5	826	.56	348	.24
6	628	.45	495	.35
7	743	.52	392	.28
8	467	.28	445	.26
		PENNSYLVANIA		
0	613	.41	324	.22
1	317	.35	316	.35
2	353	.41	228	.26
3	379	.44	220	.26
4	359	.45	188	.24
6	404	.47	180	.21
7	374	.47	186	.23
8	347	.48	202	.28
9	505	.46	342	.31

the data are aggregated for all local governments. Clearly, it will be useful in subsequent research to distinguish between local government types.

PROPERTY TAX REVENUES

Property Taxes Per Capita

Property taxes per capita show a generally U-shaped curve among the county types in Maryland, Massachusetts and Pennsylvania, respectively, with higher per capita levels for the more urban and more rural counties. Rural governments generally provide a smaller array of services than do urban governments. In rural areas, sparse settlement patterns and relatively small populations make it economically unfeasible to provide some services such as municipal water or sewer systems, and require relatively low levels of other services (1, 2, 7, 9, 10). It is interesting that despite services levels that are often lower than their urban counterparts, local governments in rural counties show a high per capita tax rate.

In New York no clear trend in per capita property taxes was apparent for the different county types. Here again, variation in property taxes may be hidden when the data are aggregated for all local governments, and subsequent research which focuses on specific government types such as muncipal government or school districts would be useful.

Property Taxes as a Percentage of Total Local Government Revenues

When analyzed as a percentage of total local government revenues, there was no clear association between the reliance of local governments on property taxes as a revenue source, and the degree of urbanness or rurality of the county types among any of the four states. As with intergovernmental aid, the reliance on property taxes varied greatly among counties in all four states, but there was no clear association with the degree of urbanness or rurality of the counties. Subsequent research

which disaggregates local government finances by type of government may be useful. A recent study by Richard J. Reeder (14) showed that some local governments in totally rural nonmetroplitan areas showed higher tax burdens than local governments in less rural nonmetropolitan areas.

And classification of urban and rural local governments by fiscal capacity is also critical to understanding property tax burdens. Variations in the property tax base and personal income are critical determinants of property tax levels.

DEMOGRAPHIC CHARACTERISTICS OF URBAN AND RURAL COUNTIES

The fiscal characteristics of local governments in urban and rural counties are closely related to the demographic characteristics of those areas. Personal income, age distribution, unemployment rate, and population change all affect local governments' fiscal capacities and needs. These demographic characteristics are analyzed in Figures 5 through 8.

PERSONAL INCOME PER CAPITA

In all four states, as shown in Figures 5A through 5D, personal income per capita in 1981 was consistently lower in rural counties. In New York, personal income in Type 0 counties averaged $11,468, compared to an average $7,717 in Type 8 counties, a difference of 33 percent. In Pennsylvania the average per capita income in Type 9 counties was 27 percent lower than in Type 0 counties ($8,069 and $11,005 respectively). In Maryland average per capita income in Type 8 counties was 27 percent lower than per capita income in Type 0 counties ($7,506 compared to $9,842). And in Massachusetts, Type 4 counties (disregarding Type 7 and Type 9 counties) had an average income 14 percent lower than Type 0 counties ($10,305 compared to $12,018).

The pattern for the county types between these urban and rural extremes varied among the four states. In Maryland and New York, average per capita income was lower in the Type 0, central metropolitan, counties than in the neighboring Type 1, fringe metropolitan counties. And in Maryland, per capita income peaked again somewhat in Type 6 counties before declining in Type 7 and 8 counties. In New York income declined from Type 1 to Type 5 counties and then flattened out in the remaining nonmetropolitan counties. In Pennsylvania, the decline in income was fairly

FIGURE 5A

PER CAPITA INCOME FOR COUNTY AREAS: 1981
MARYLAND

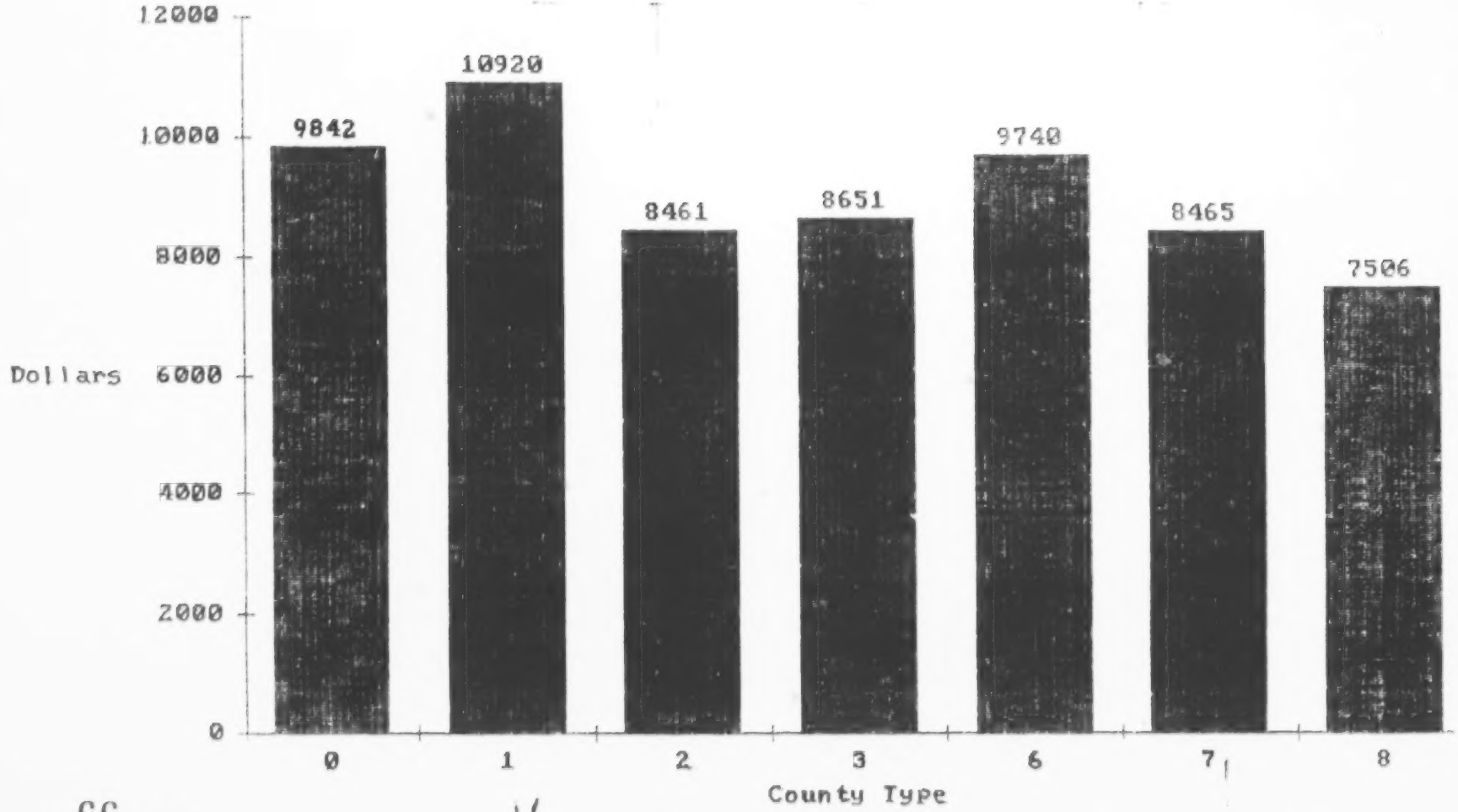


FIGURE 5B

PER CAPITA INCOME FOR COUNTY AREAS: 1981
MASSACHUSETTS

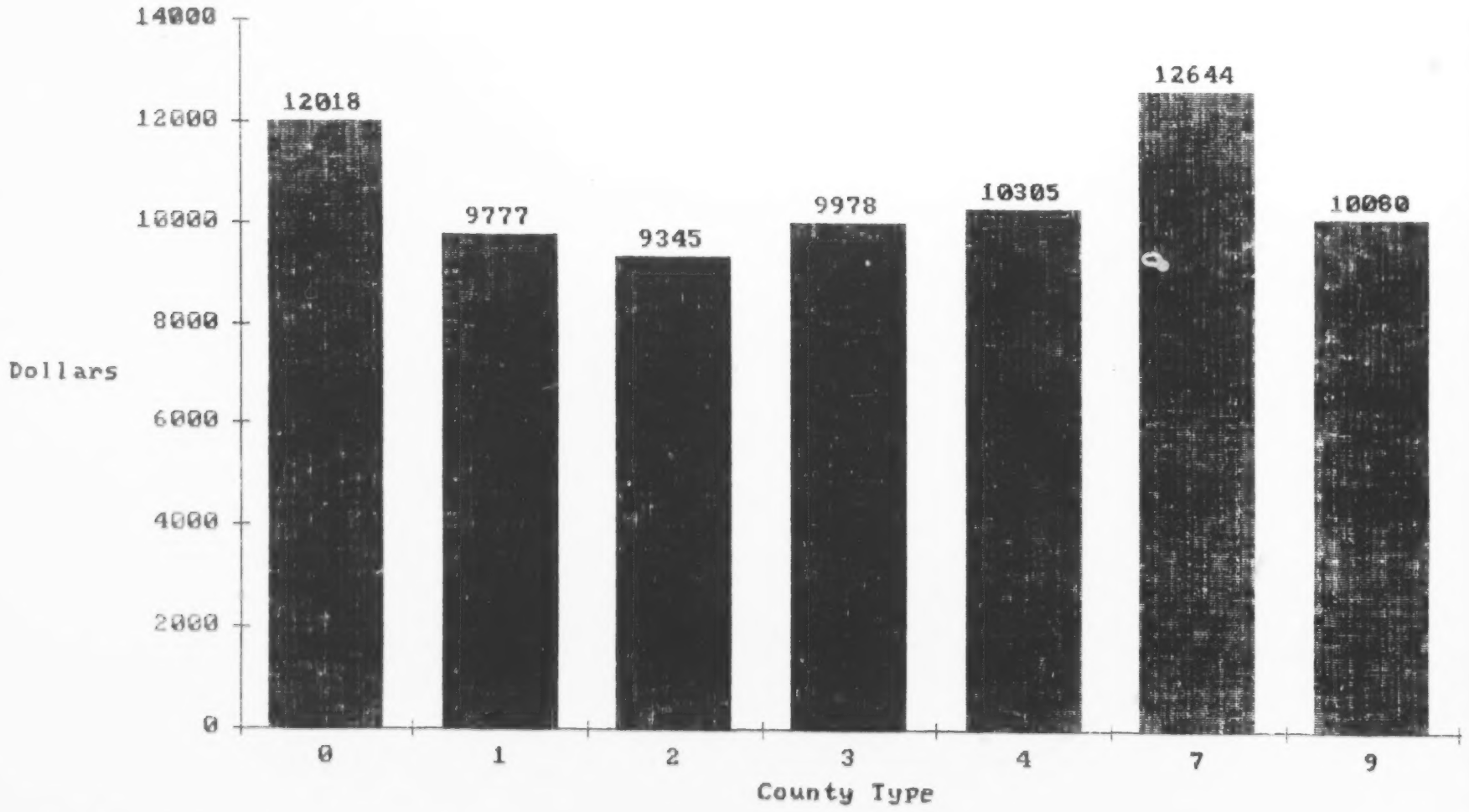


FIGURE 5C

PER CAPITA INCOME FOR COUNTY AREAS: 1981
NEW YORK

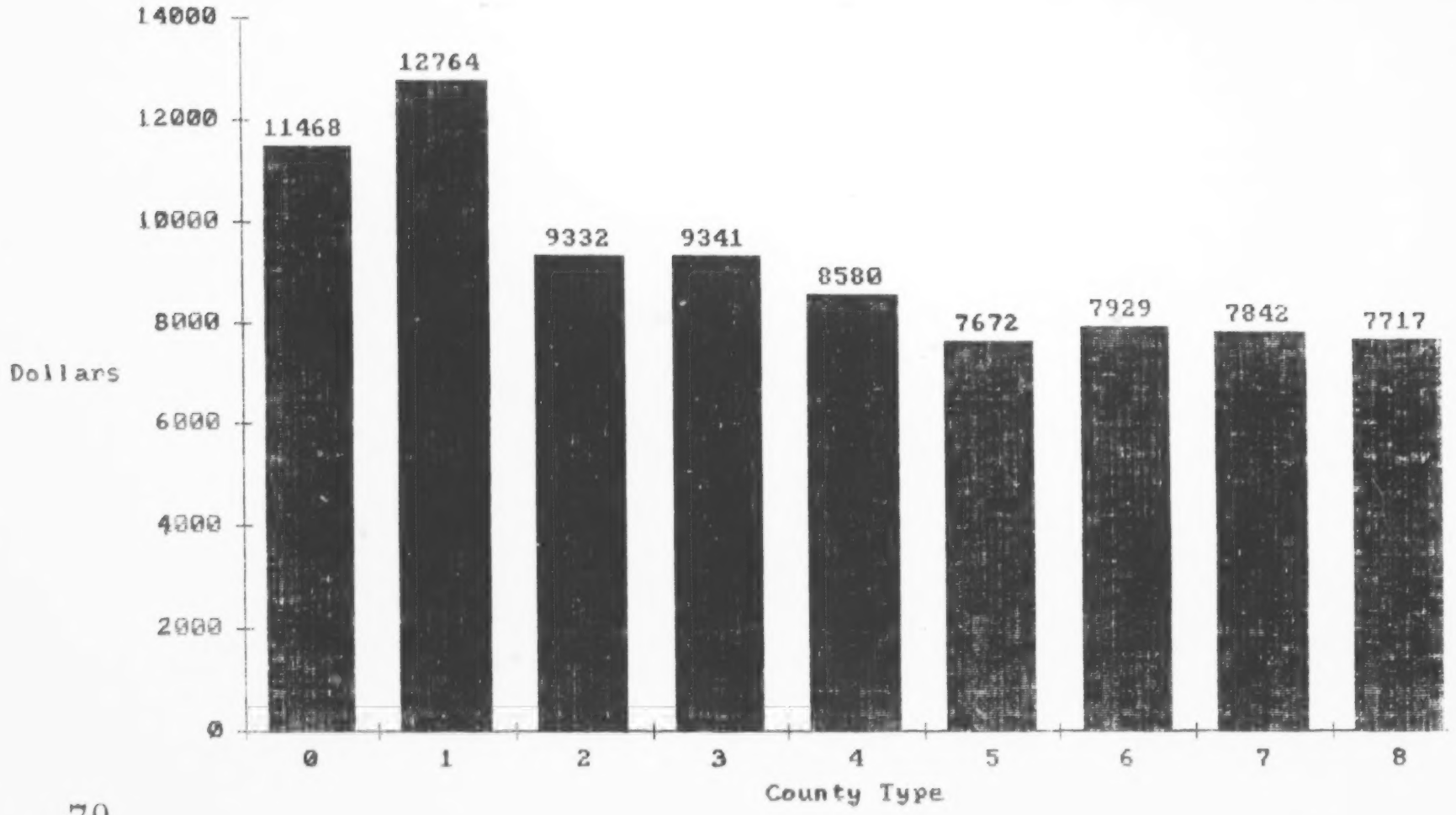
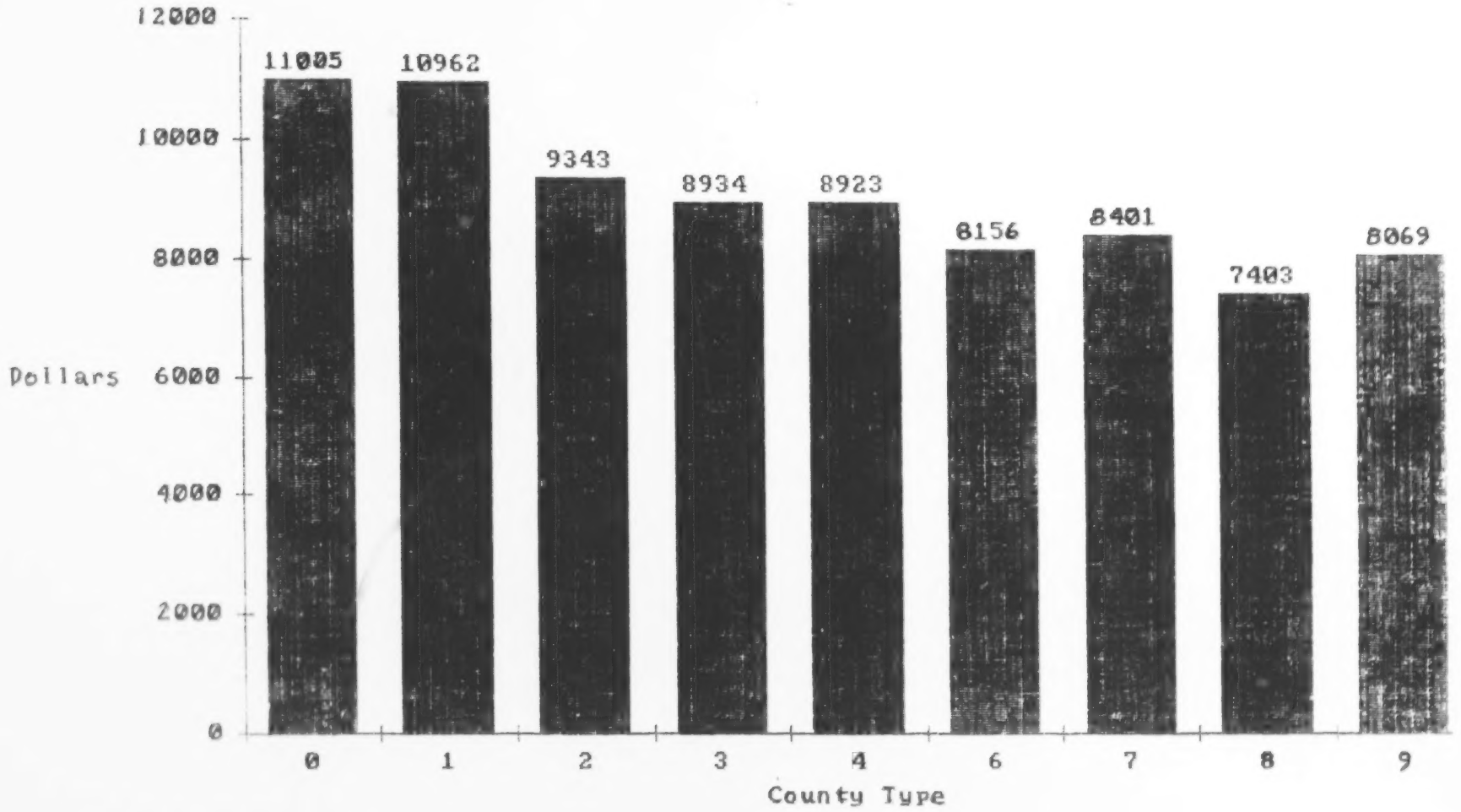


FIGURE 5D

PER CAPITA INCOME FOR COUNTY AREAS: 1981
PENNSYLVANIA



consistent From Type 0 to Type 8 counties, and then rose slightly in Type 9 counties, but at a level 27 percent below Type 0 counties. And in Massachusetts there was a U-shaped curve from Type 0 to Type 4 counties (again, discounting Types 7 and 9), with the lowest income found in Type 2 counties but with levels for Type 4 counties still 14 percent below incomes for Type 0 counties.

Comparative studies of income levels in urban and rural America have shown that income levels are rising in rural America, but they remain somewhat below urban levels (8, 13). The earlier analysis of tax revenues showed a higher level of tax levies per capita among local governments in the most urban and most rural counties. Given the lower income levels which appear in rural areas, it appears that rural residents are experiencing a high tax burden relative to personal capacity. Given, also, the lower level of municipal services generally found in rural areas, it appears that more attention should be paid to rural fiscal stress, which may be as significant as urban stresses, although of a different character and dynamic.

POPULATION CHANGE

As Figures 6A through 6D shows, the most urban Type 0 counties in all four states all experienced population losses from 1970 to 1980, ranging from 4 percent in Massachusetts to 13 percent in Maryland. The most rural counties all showed population gain, ranging from .03 percent in Pennsylvania to 20 percent in Maryland. Between these two extremes, however, the pattern is unclear.

The relative gain in population in rural areas has clear implications for infrastructure capacity and service demands (12). Population growth may require additional investments in new infrastructure such as school buildings. The rapid increases in population taking place in rural

FIGURE 6A

PERCENT POPULATION CHANGE IN COUNTY AREAS: 1970-1980
MARYLAND

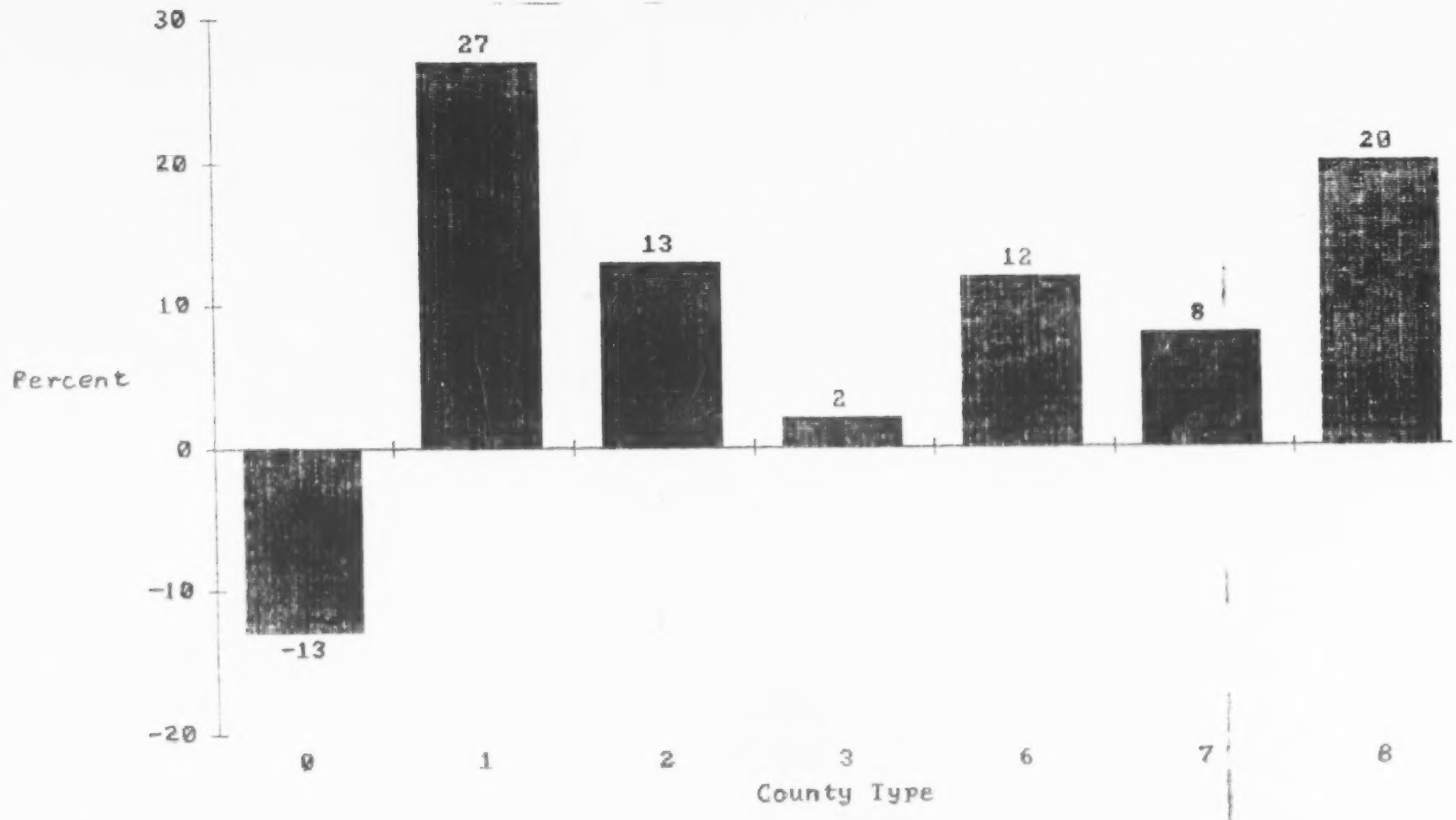


FIGURE 6B

PERCENT POPULATION CHANGE IN COUNTY AREAS: 1970-1980
MASSACHUSETTS

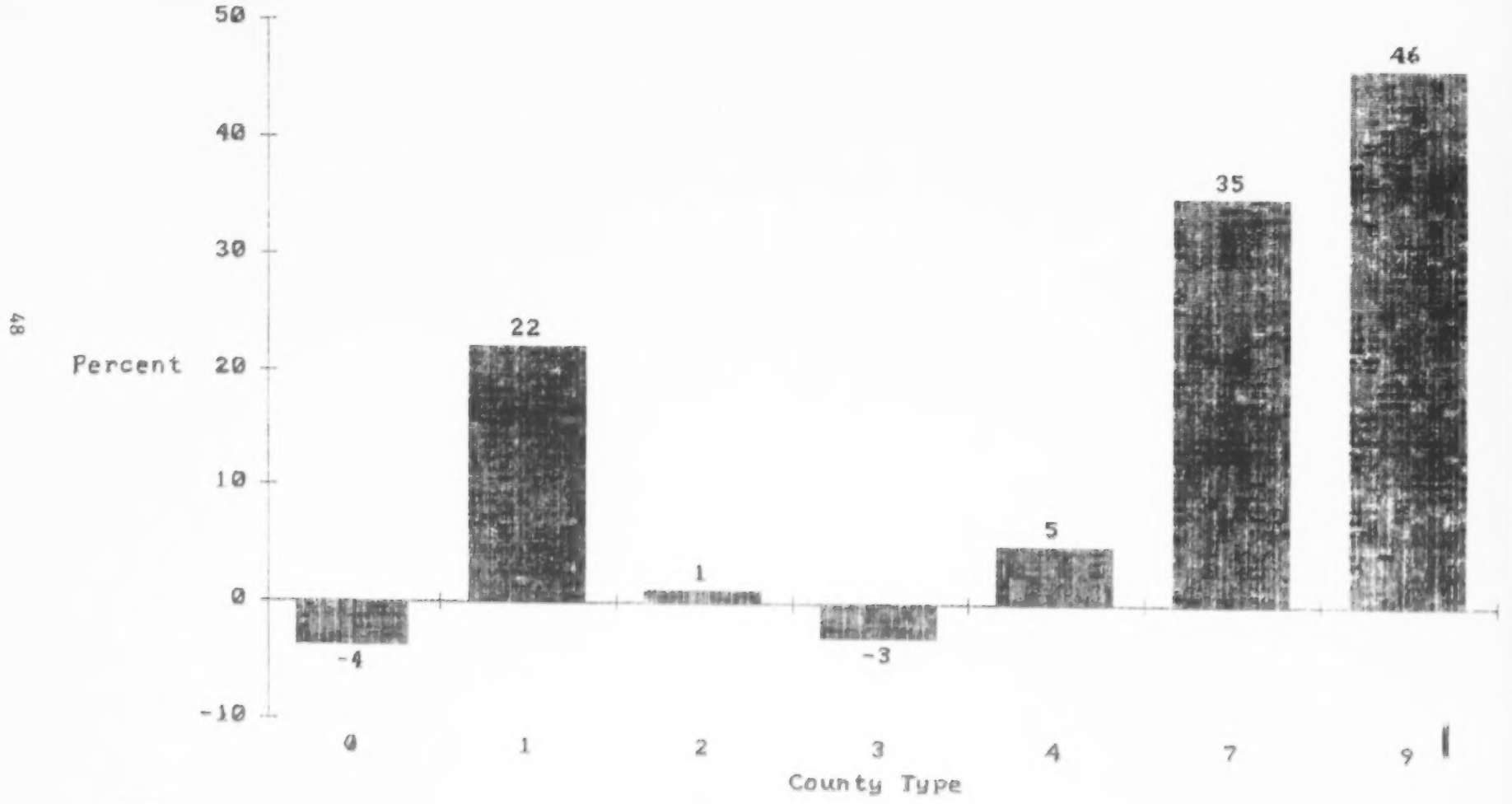


FIGURE 6C

PERCENT POPULATION CHANGE IN COUNTY AREAS: 1970-1980
NEW YORK

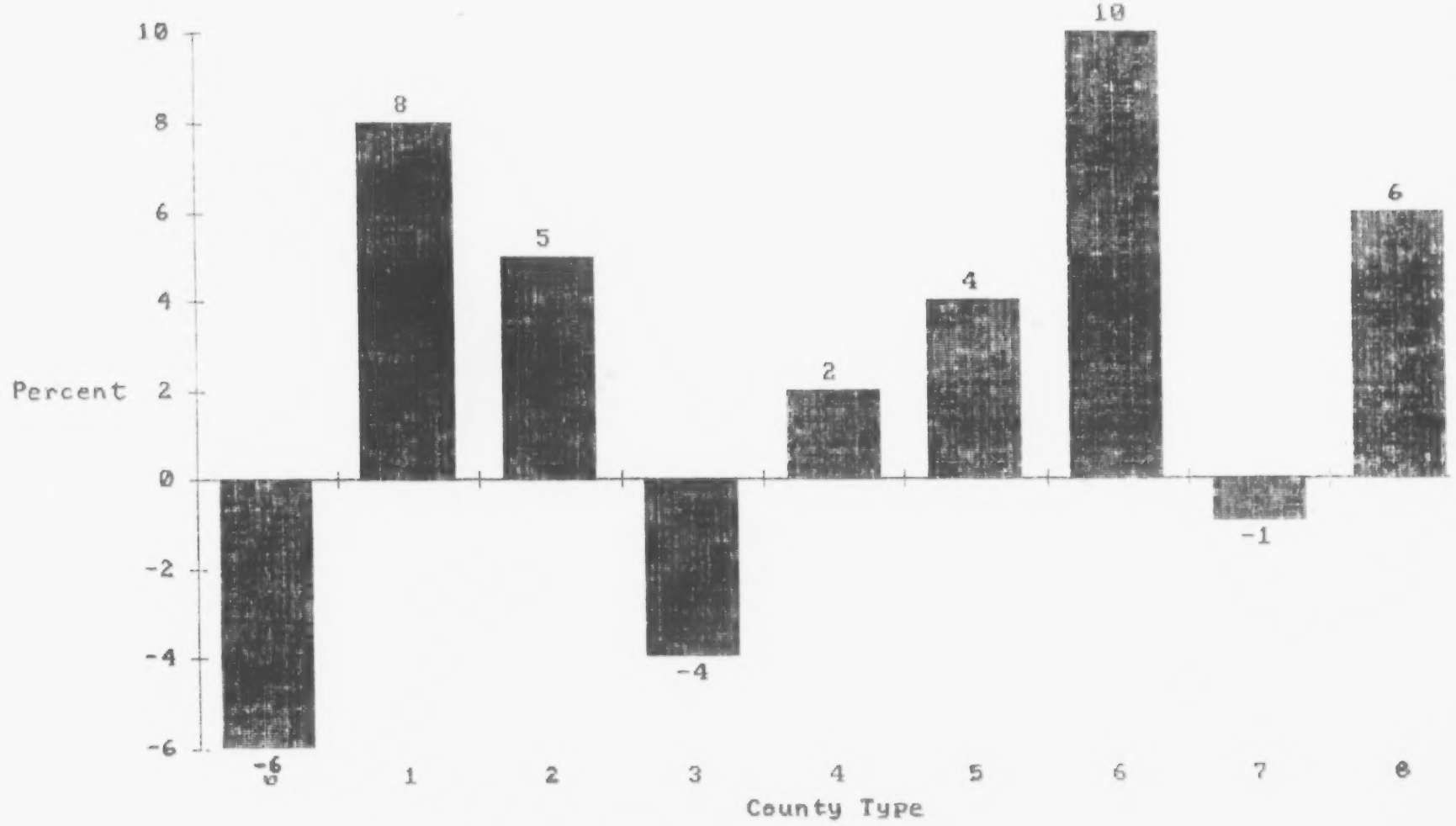
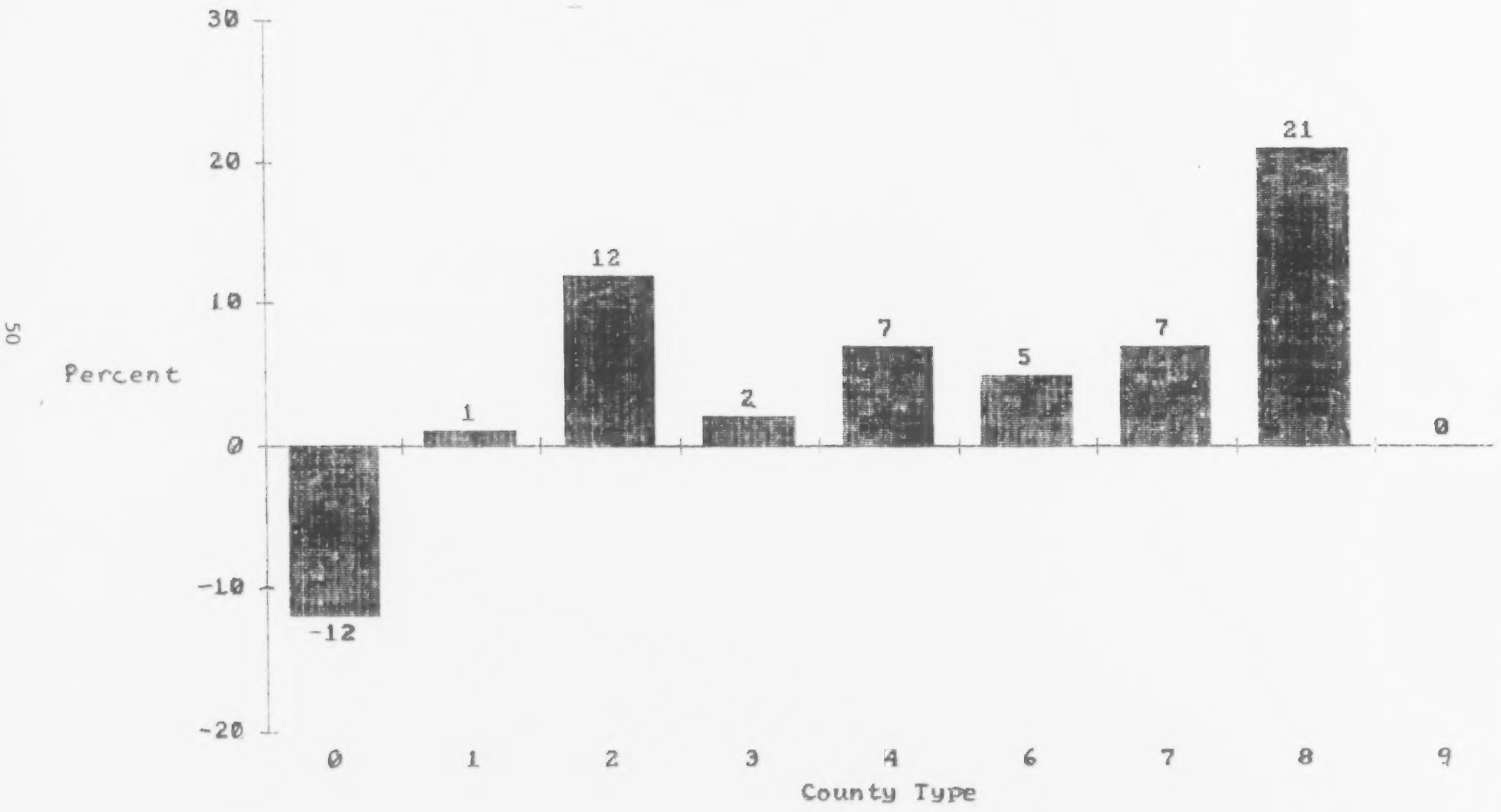


FIGURE 6D

PERCENT POPULATION CHANGE IN COUNTY AREAS: 1970-1980
PENNSYLVANIA



Massachusetts are placing unprecedented strain on volunteer-led rural governments.

PERCENT POPULATION OVER 65

Figures 7A through 7D show the percent of population over 65 in county areas in 1980. There is no clear pattern. However, the more urban and rural counties tend to show relatively higher levels of elderly, with a lower percent of elderly shown in the type 1 and type 2 metropolitan counties surrounding the central urban counties.

Both elders and school-age population are sometimes considered "dependent populations" since they may not generate sufficient revenue to meet service demands. However, research is needed to better understand the fiscal and economic implications of both of these population groups on rural communities. Resort and retirement commuities, for instance, may have a high percentage of population over 65, but enjoy a strong tax base and relatively few service demands.

PERCENT UNEMPLOYED

Figures 8A through 8D show percent unemployed by county areas. The pattern of unemployment varies among the four states, and shows no clear relationship to the type of county. In Maryland, the percent unemployed is highest in Type 0 counties. In Pennsylvania, the percent unemployed is relatively high in both Type 0 counties and in all rural counties (Types 4 through 9). And in Massachusetts and New York there is no clear pattern, although the percent unemployed is generally higher among rural counties.

FIGURE 7A

PERCENT POPULATION OVER 65 IN COUNTY AREAS: 1980
MARYLAND

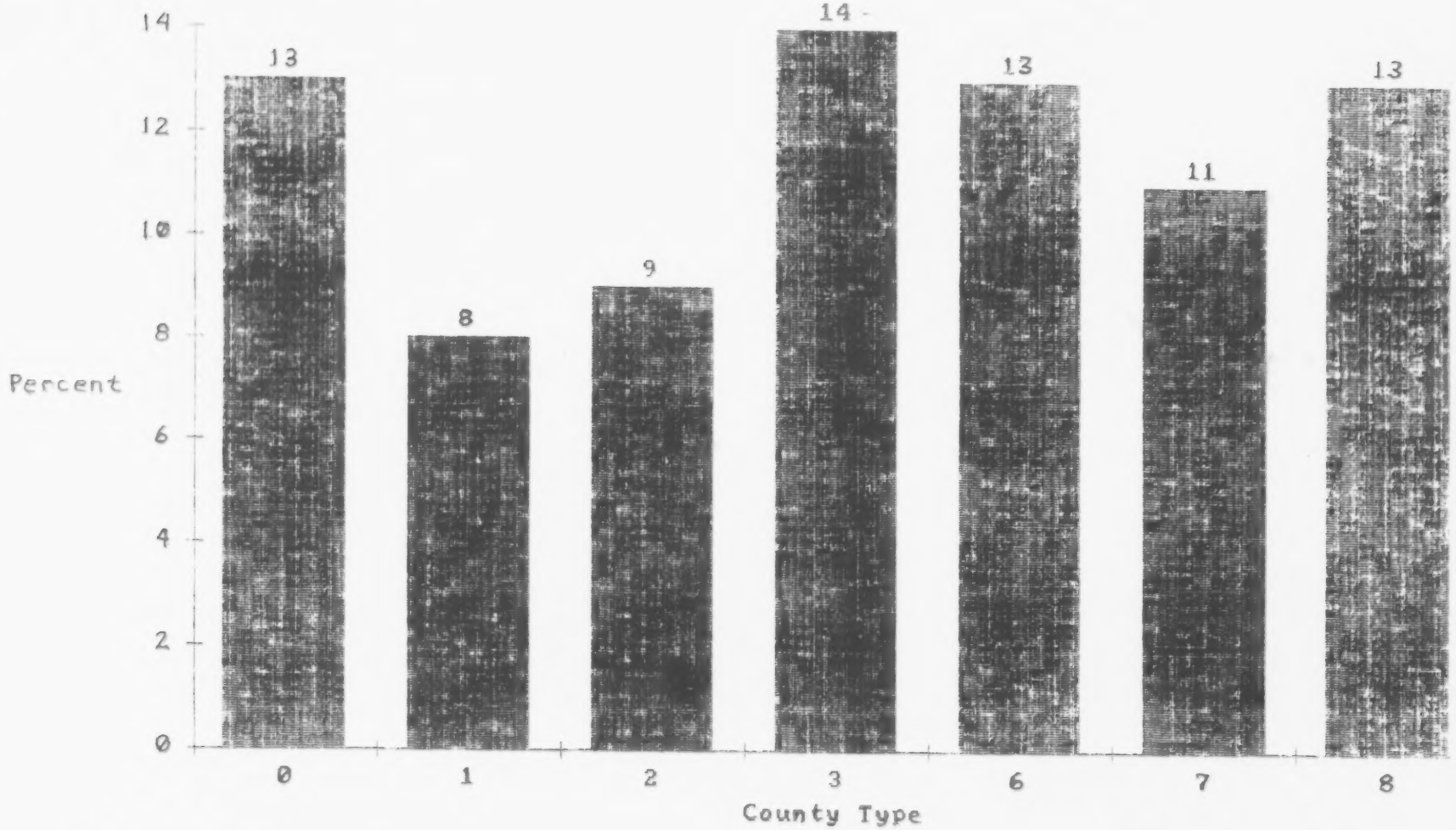


FIGURE 7B

PERCENT POPULATION OVER 65 IN COUNTY AREAS: 1980
MASSACHUSETTS

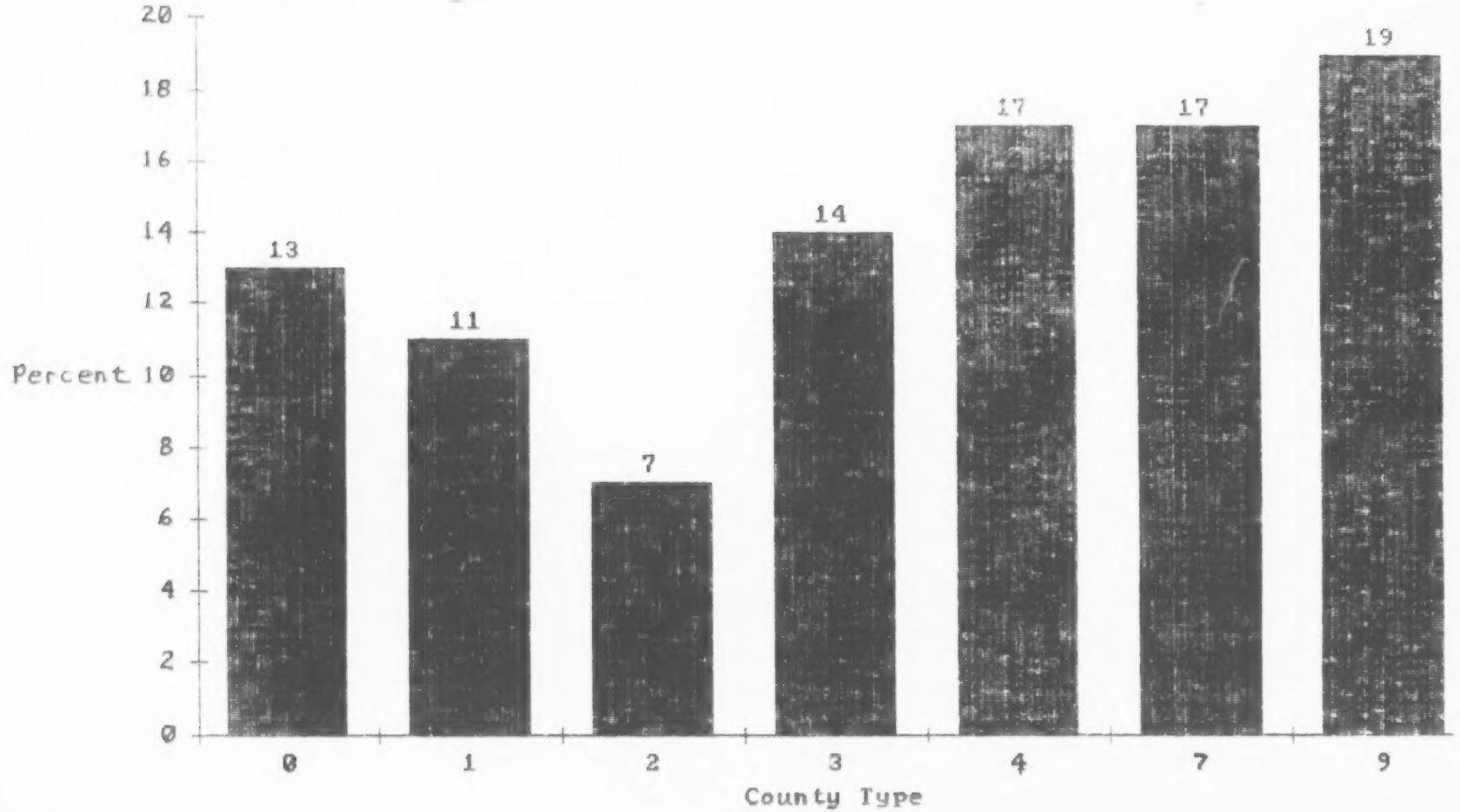


FIGURE 7C

PERCENT POPULATION OVER 65 IN COUNTY AREAS: 1980
NEW YORK

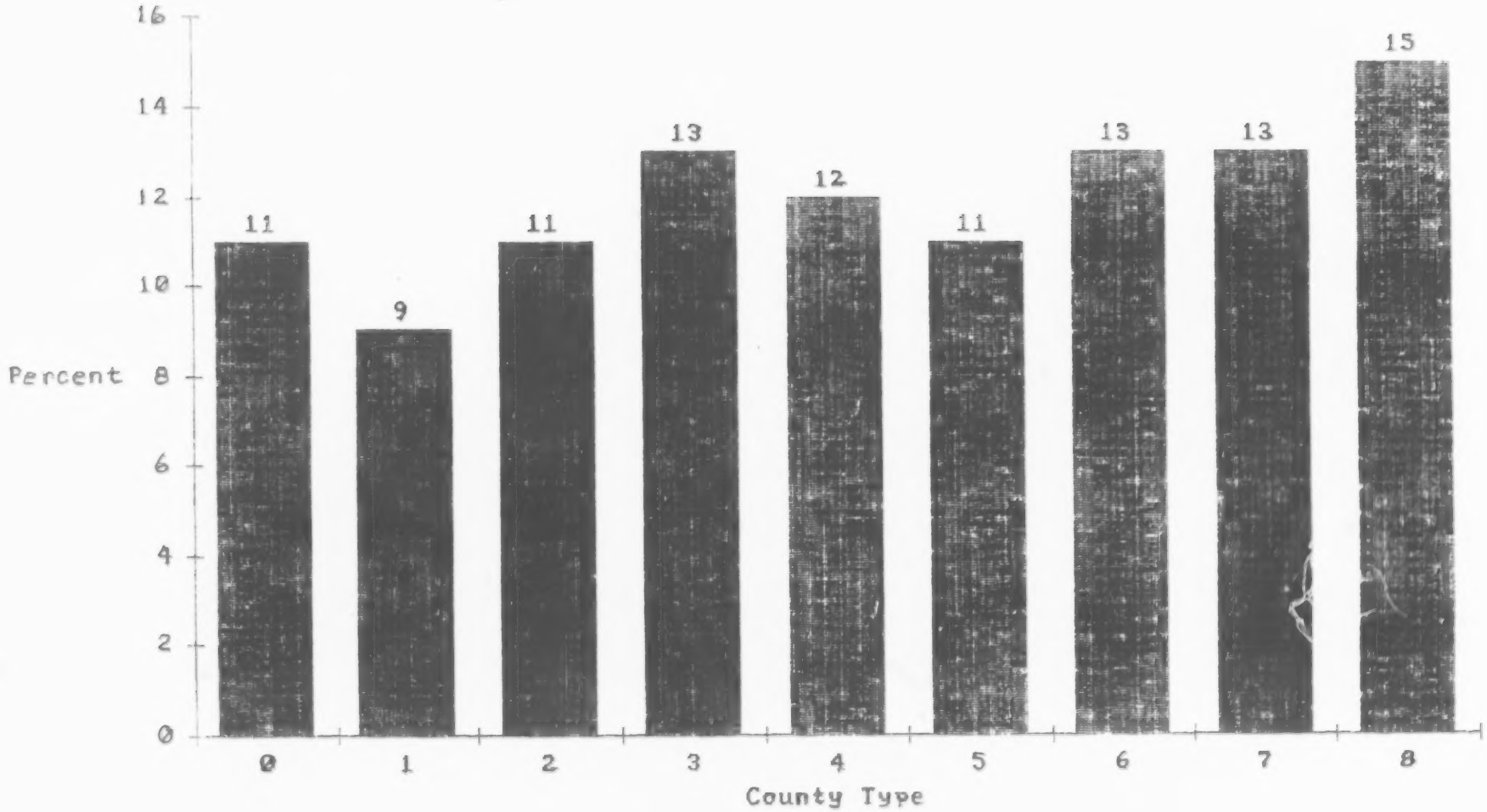


FIGURE 7D

PERCENT POPULATION OVER 65 IN COUNTY AREAS: 1980
PENNSYLVANIA

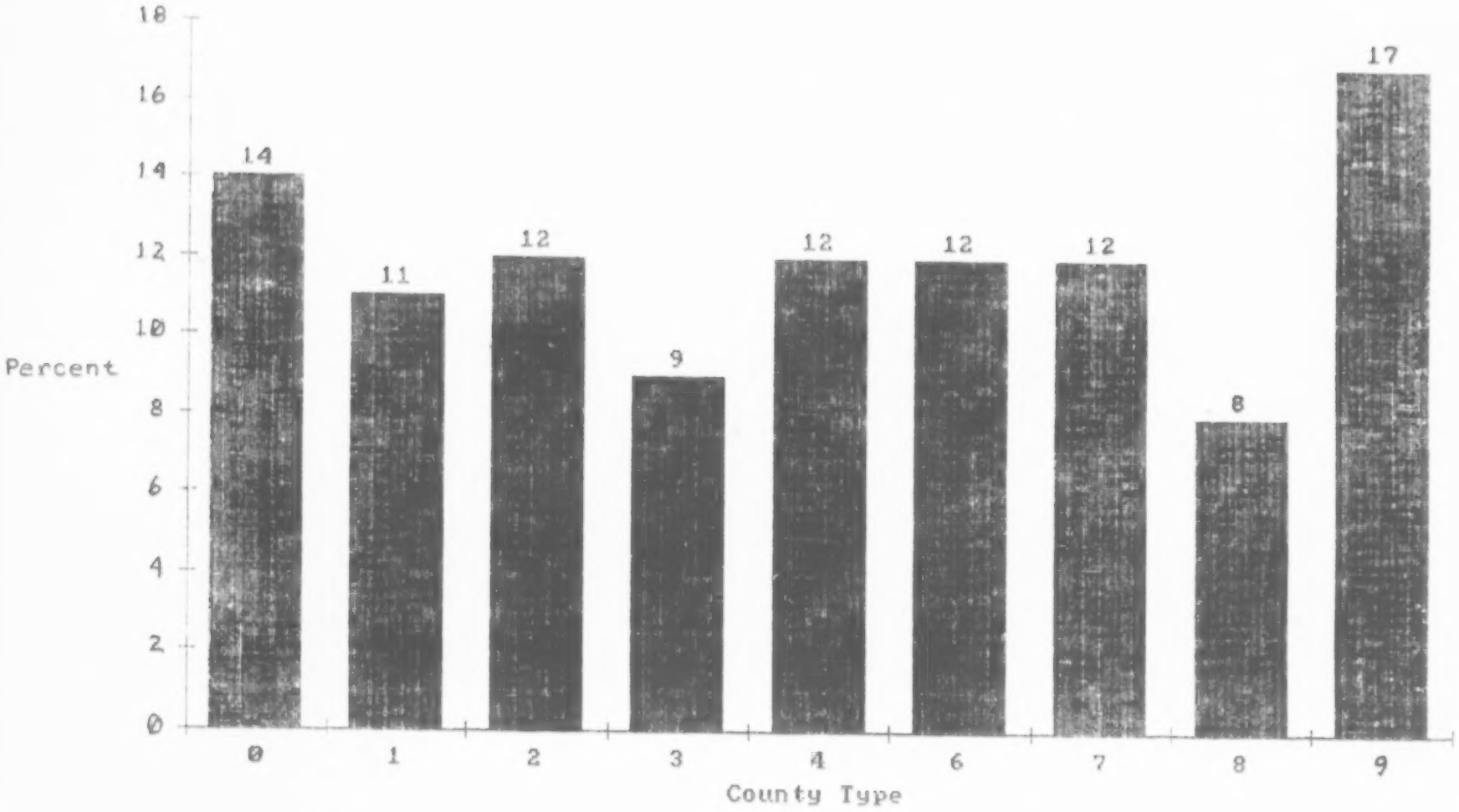


FIGURE 8A

PERCENT UNEMPLOYED IN COUNTY AREAS: 1980
MARYLAND

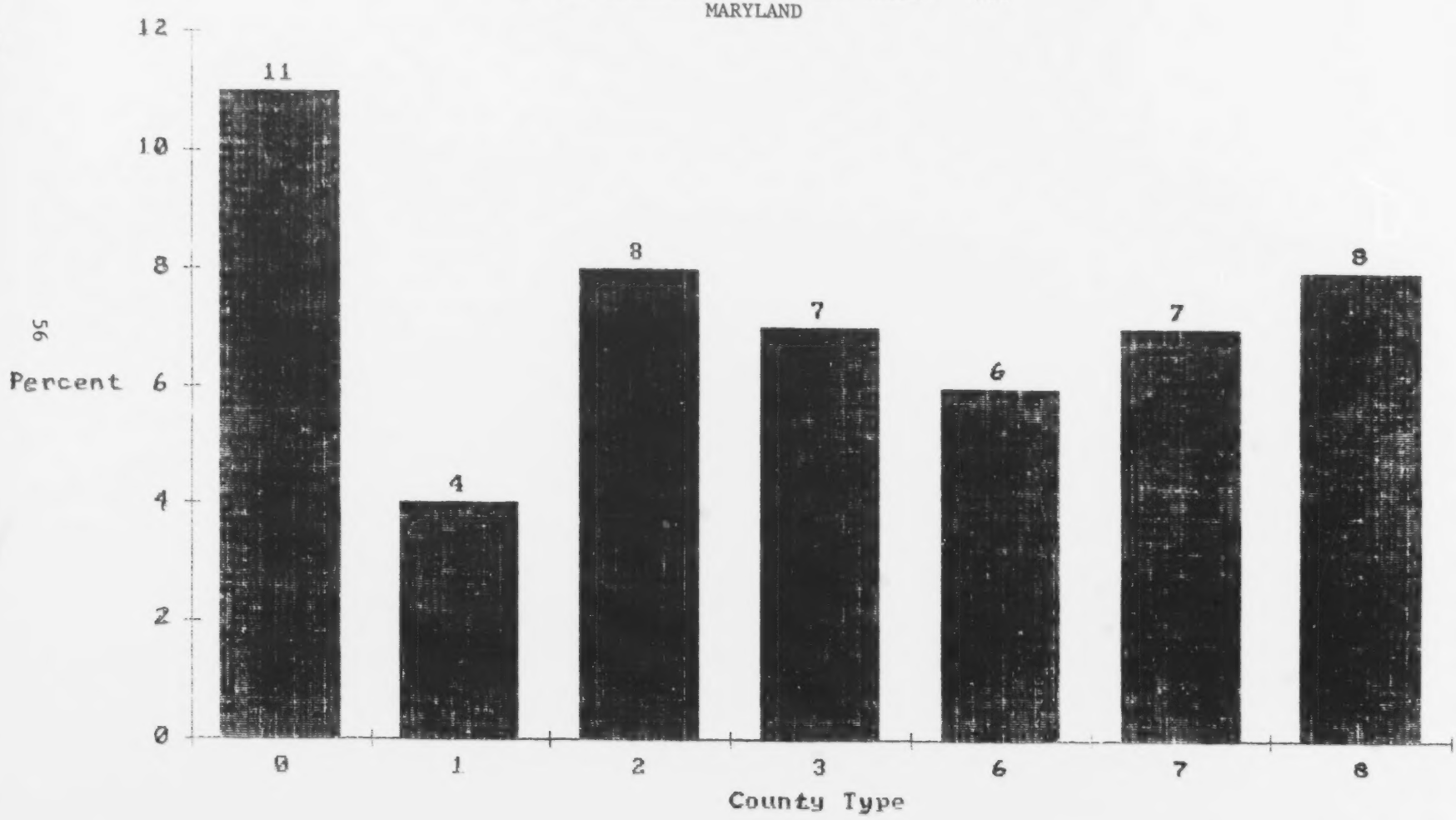


FIGURE 8B

PERCENT UNEMPLOYED IN COUNTY AREAS: 1980
MASSACHUSETTS

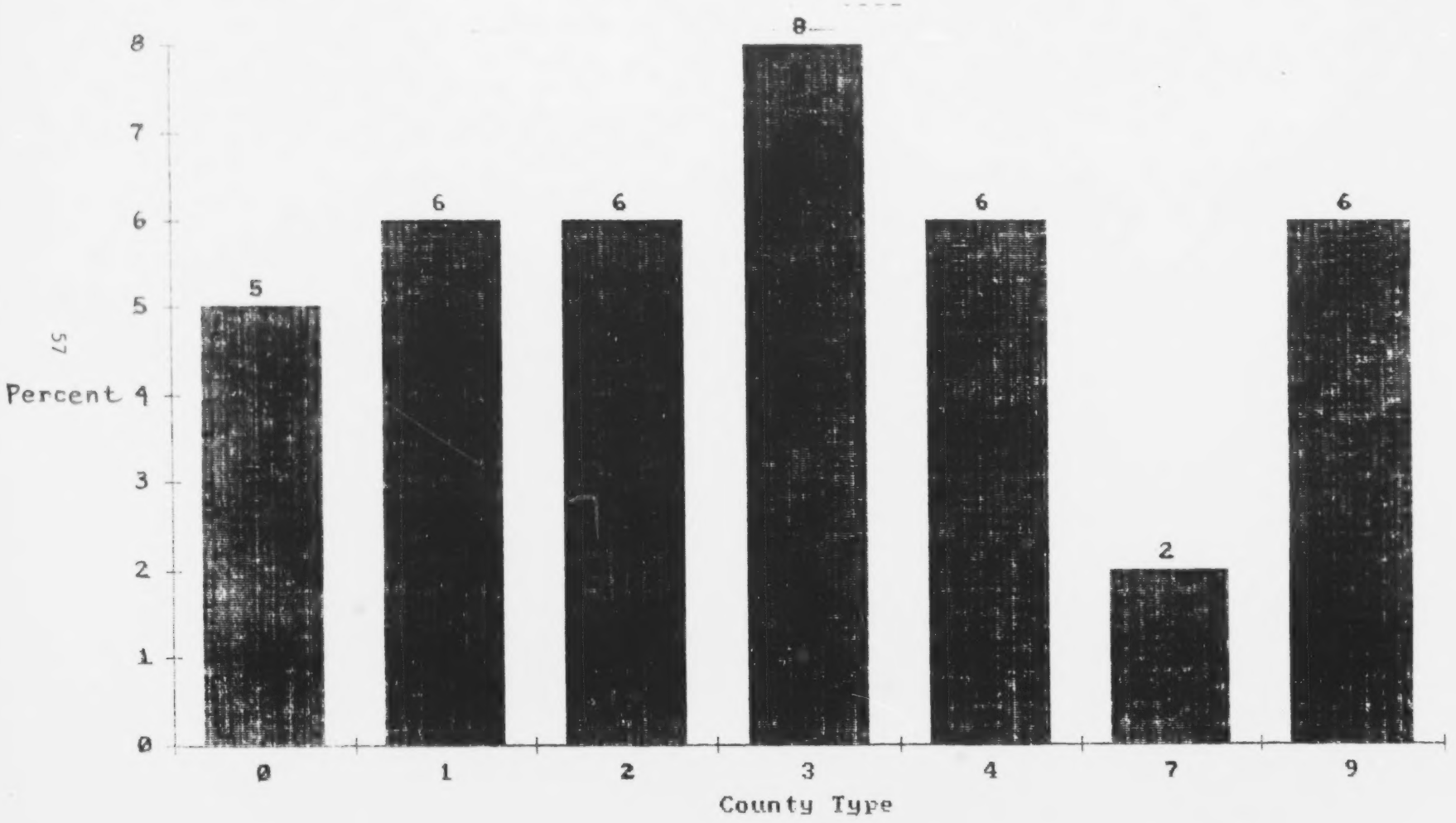


FIGURE 8C

PERCENT UNEMPLOYED IN COUNTY AREAS: 1980
NEW YORK

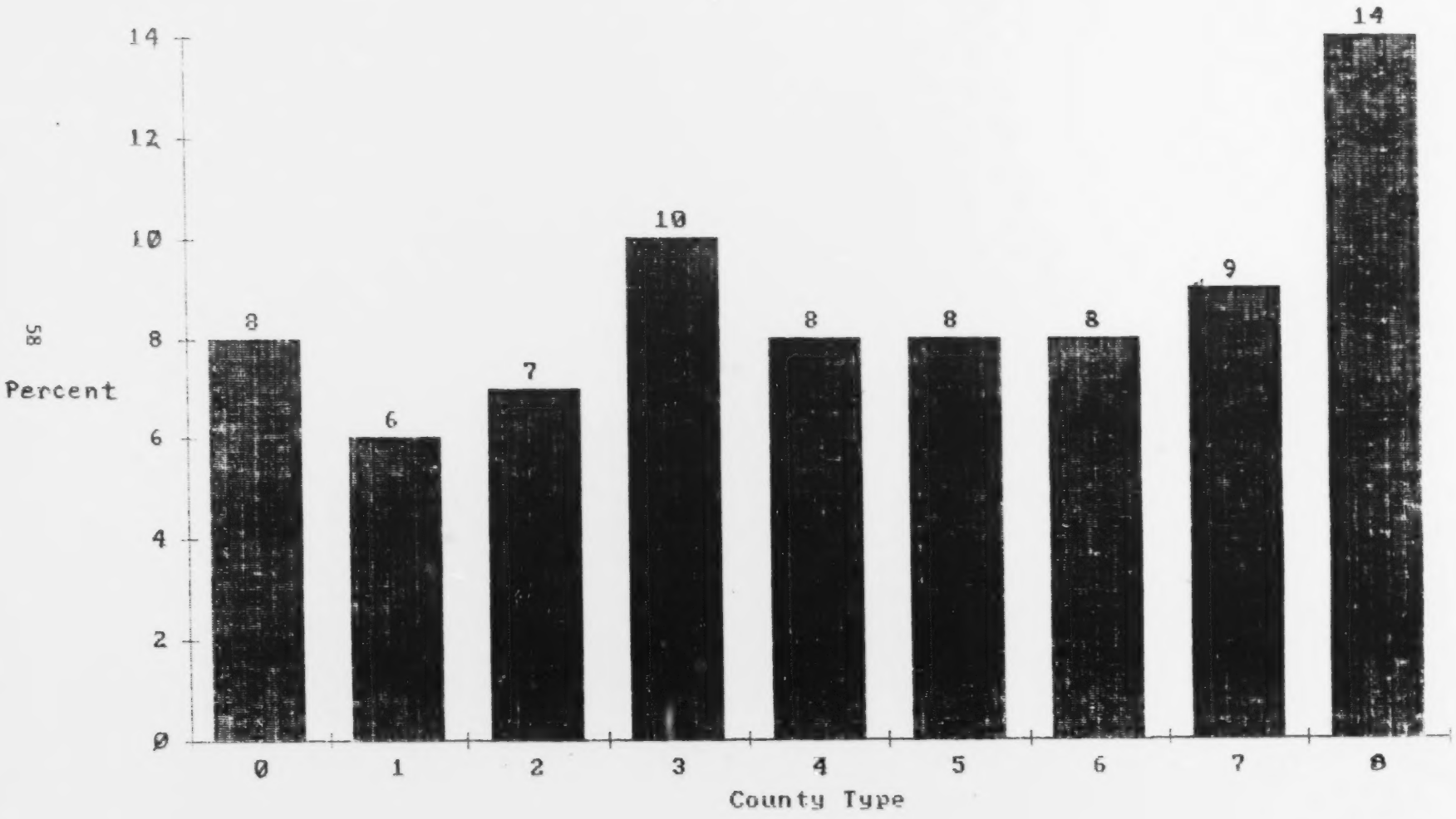
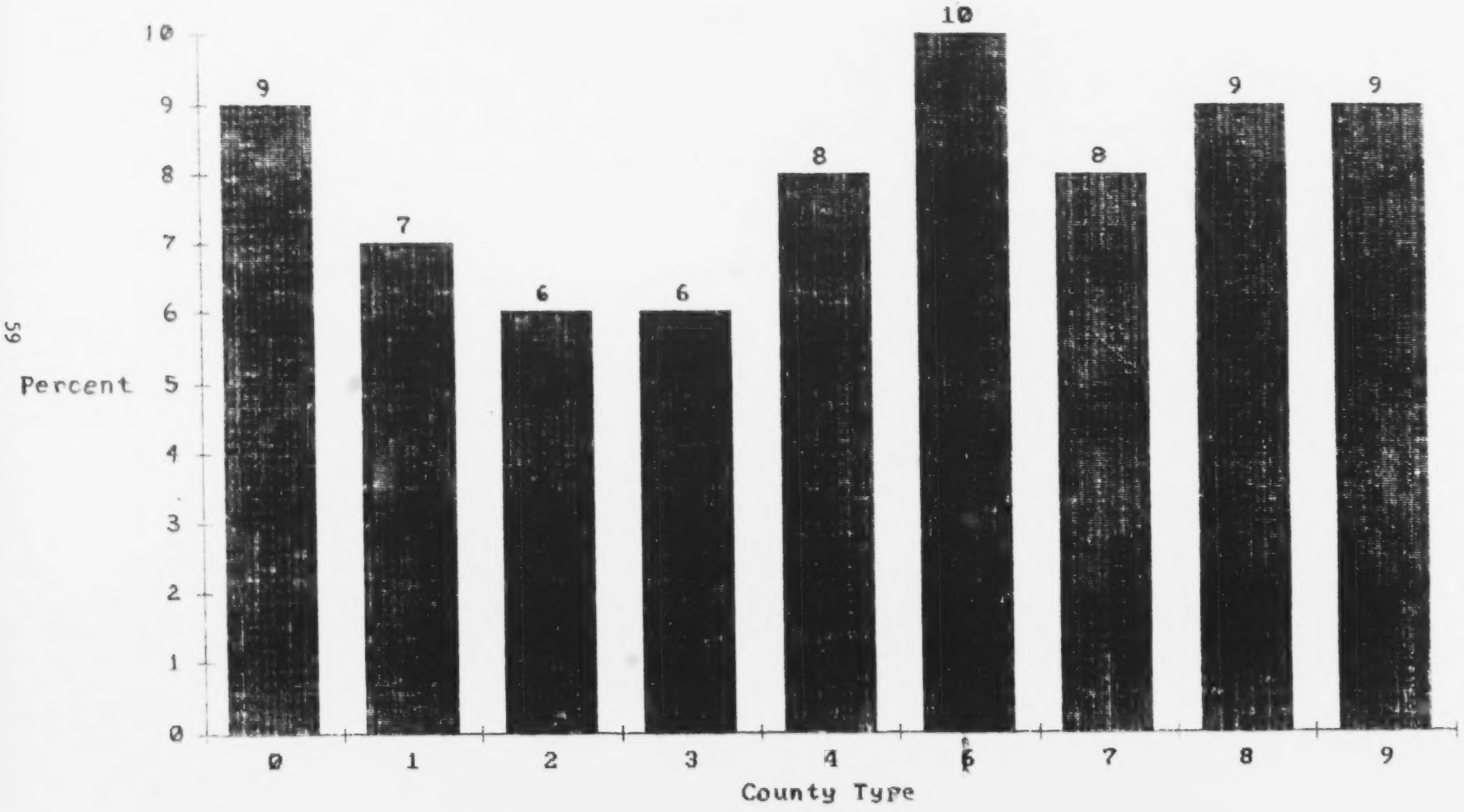


FIGURE 8D

PERCENT UNEMPLOYED IN COUNTY AREAS: 1980
PENNSYLVANIA



CONCLUSION

This preliminary analysis has identified clear differences in both finance and demographic characteristics of local governments in urban and rural counties in four Northeast states. The data indicate that local governments in the most rural counties have lower levels of revenues and expenditures, and budgets dominated by education and highway expenditures. Rural counties also have a relatively high percentage of elderly and low-income population. And rural counties have seen more population growth than urban counties. All these findings suggest that local governments in the most rural counties may be experiencing signficant stress.

These findings are consistent with public finance and economic literature. Frederick D. Stocker, reporting on the fiscal needs and resources of nonmetropolitan communities, noted that in 1972 municipal general revenues per capita declined consistently with population (16). He noted further that Municipalities with population below 2,500 raised only about one-third as much per capita as the average for all cities. Property taxes generated a slightly larger share of small-town revenue; state aid also represented a smaller share of revenue for small towns. Richard J. Reeder, reporting on fiscal pressures on nonmetropolitan local governments, found that in 1977 local governments in the most rural areas experienced high levels of fiscal stress in the midseventies that were associated with high and rising local taxes (14). Hite and Ulbrich, in 1986, focussed on local government economic and fiscal stress in fifteen agricultural states, and found significant variation among the states which made generalizations questionable, but a pattern suggesting that fiscal indicators have probably worsened in the last two years (11).

The fiscal pressures on rural local governments are exacerbated by consistently lower levels of personal income, a simple but most often used

measure of local government fiscal capacity (3). An Economic Research Service report issued in 1986 (13) noted that median family income in nonmetropolitan areas was rising, but by 1979 was still only 85 percent of the national average. In the most rural counties, median family income was only 71 percent of the national average.

It is not surprising, given the lack of fiscal capacacity of rural local governments, that rural expenditure levels are consistently low. Aronson and Hilley wrote that efforts made to discover and measure the significant variables, other than population, that explain the diversity among states in per capita state-local expenditures have found that the most important variable is income (3). Stocker wrote that in 1971-72 local government per capita expenditures declined as population declined, with the exception of the smallest counties, under 10,000 population, which showed higher per capita spending than the average of counties of 10,000 to 50,000 population. Stocker, however, warns that expenditure patterns cannot tell us much about the quality or quantity of public service delivered. Is a satisfactory level of services being provided in rural areas? Data on service outputs is a major research need for rural government fiscal policy.

A research agenda which responds to these concerns is suggested in the next part of this Report.

SOME IMPLICATIONS FOR FUTURE RESEARCH

The original purpose of this preliminary research was to examine whether there are clear differences between urban and rural units of local government that may be useful in either public policy or technical assistance planning. Fiscal characteristics of local government were felt to be a reasonable place to start the examination since a substantial part of the decision making and the management of local units of government are reflected in their fiscal condition. The data aggregation compromises described earlier were made in the hope of finding patterns across the states that are independent of state level institutions and governmental forms.

In some degree it is remarkable that any patterns emerged at all given the variation between governments that was obscured by the data aggregation alone. A similar observation can be made about the few patterns that appeared to be consistent across states given the great differences in governmental form, responsibilities and other institutional differences at the state level.

State Specific Research on Local Government Characteristics:

Some of the implications for future research suggested by this work come out of the acknowledgement of what was lost in the attempt to make the 'across state' comparisons. That is, the within state differences between units of local government need to be examined on a state by state basis. This could include interactions between governmental form and other distinguishing characteristics, eg. townships vs. boroughs in Pennsylvania or representative vs. open town meeting in Massachusetts, or more generally, between units of government serving different economic bases.

The fundamental reason for this argument comes out of the recognition that even if the results of this research had been more definitive there would still be the need of state specific typologies to distinguish between units of local government since much of the public policy that affects local government is enacted or enabled at the state level. This identifies the importance of policy specific and relevant analysis as opposed to the more broad brush descriptive research of which this was an example. Indeed the future research agenda on local government can be divided into these two general categories.

Improving Descriptive Research On Local Government Characteristics:

Because descriptive research is more general it must of necessity be more theoretically based. However, there are great gaps in our theoretical understanding of the economics or the political-economy of local government.

One of the clear limitations in interpreting the patterns of the expenditure data is that despite efforts to avoid it there remains a sense of comparing apples and oranges in this analysis. The comparisons of overall expenditures are likely inappropriate since the package of services offered in different communities is quite different and that package likely varies systematically by size, rurality or other characteristic such as economic base. Several factors affect the variation in the level and mix of services provided by communities including the following:

1. Collective tastes and preferences of citizens,
2. Community environment or circumstances such as those that result in the public provision of drinking water and of outdoor recreation via parks in more urban communities,
3. State and federal government mandated services or service standards,

4. A fixed cost of some minimum amount associated with being a governmental unit regardless of size.

It seems clear that comparisons or examinations of the fiscal circumstances of local units of government should in some degree take such factors into account. For example, where intercommunity comparisons are to be made and where some services are provided privately in one community and publicly in another, it is appropriate to either impute a value to the private provision or eliminate the expenditures for the publicly provided service from those cases where it occurs.

The policy implications for state or federal levels vis a vis local government are different if the service is in response to tastes and preferences or is mandated by state or federal government. The interpretation of the cost functions of services and the issues of size or scale have quite different implications in the two settings. An even more complex question arises if the service is mandated as in education but there is variation in the level offered in response to tastes.

Finally, since the function of government is not simply the provision of services but a much more complex function of democratic governance, the issue and definition of "efficiency" in the analysis of local government must account for the governance function.

Similar questions for further research are suggested by the findings with respect to the results of the revenue data. Since tastes and preferences are likely associated with incomes and thus to the ability to pay, there is a great deal to be sorted out in relating the functions of government, the circumstances of communities, the cost functions of services and

the ability to pay to the process of governance. It seems clear that this is one of the places where we are at the edge of what we know and understand.

All of this analysis is further complicated by the lack of comparable data on local government activities and on just what broad categories or typologies should be used to distinguish between units of local government. There is not even much agreement on the definition of rural among those who agree that "rural" is a relevant typology.

WHAT NEXT?

Clearly the next steps to be taken depend on the purposes of the analysis. As argued above, state-local policy specific analysis must be accomplished on a state by state basis since the policies usually distinguish or discriminate state specific characteristics of governments or use state specific instruments of policy. Thus the greatest productivity of across-state collaboration on research questions falls under the category of "general descriptive research" or "theoretical research" under the arguments given.

Because nationally collected data on local finances does not permit analysis of some of the most meaningful governmental units at the state level and state source date about local government, if it exists, is not comparable across states there are serious limits to just what empirical, descriptive research across states can be accomplished. Indeed, the careful examination and conceptualization of just what research will be useful and meaningful across state institutional borders is itself one of the most important items on the future research agenda.

A plausible example of research that would be productive on a multi-state basis is a study of the incidence of private costs for services that are sometimes privately produced and other times publicly produced. Such

services when privately produced are subject to private markets and may be somewhat less difficult to estimate across states. Further, results of even state specific findings on such services could be used across states.

Clearly the examination of this and other such topics deserve more attention that this report can accomplish. It does suggest a direction for the Northeastern Center for Rural Development to take in further encouraging research on the problems of local governments in the region.

APPENDIX

TABLE A1

RURAL-URBAN CONTINUUM CODE

STATE	COUNTY TYPE	COUNTY NAME
MARYLAND	0	Baltimore City
	1	Anne Arundel
		Baltimore
		Calvert
		Carroll
		Charles
		Frederick
		Harford
		Howard
		Montgomery
		Prince Georges
		Queen Anne's
	2	Cecil
	3	Allegany
		Washington
	6	Kent
		St. Mary's
		Talbot
	7	Dorchester
		Somerset
		Wicomico
		Worcester
	8	Caroline
		Garrett
MASSACHUSETTS	0	Middlesex
		Suffolk
	1	Essex
		Norfolk
		Plymouth
	2	Bristol
		Hampden
		Hampshire
		Worcester
	3	Berkshire
	4	Barnstable
		Franklin
	7	Nantucket
	9	Dukes

STATE	COUNTY CODE	COUNTY NAME
NEW YORK	0	Bronx
		Erie
		Kings
		New York
		Queens
		Richmond
	1	Nassau
		Niagara
		Putnam
		Rockland
		Suffolk
		Westchester
	2	Albany
		Broome
		Dutchess
		Greene
		Herkimer
		Livingston
		Madison
		Monroe
		Montgomery
		Oneida
		Onondaga
		Ontario
		Orange
		Orleans
		Oswego
		Rensselaer
		Saratoga
		Schenectady
		Tioga
		Warren
		Washington
		Wayne
	3	Chemung
	4	Cattaraugus
		Cayuga
		Chautauqua
		Cortland
		Fulton
		Genesee
		Steuben
		Tompkins
		Ulster

Urban-Rural Continuum, p. 3

STATE	COUNTY TYPE	COUNTY NAME
NEW YORK	5	Clinton
		Jefferson
		St. Lawrence
	6	Chenango
		Columbia
		Delawaare
		Essex
		Lewis
		Otsego
		Schoharie
		Sullivan
		Wyoming
		Yates
	7	Allegany
		Franklin
		Seneca
	8	Hamilton
		Schuyler
PENNSYLVANIA	0	Allegheny
		Philadelphia
	1	Beaver
		Bucks
		Chester
		Delaware
		Fayette
		Montgomery
		Washington
		Westmoreland
	2	Adams
		Berks
		Cambria
		Carbon
		Centre
		Columbia
		Cumberland
		Dauphin
		Erie
		Lackawanna
		Lancaster
		Lebanon
		Lehigh
		Luzerne
		Lycoming
		Monroe
		Northampton

PENNSYLVANIA, cont.	2, cont.	Perry
		Somerset
		Wyoming
		York
	3	Blair
		Mercer
	4	Butler
		Crawford
		Franklin
		Indiana
		Lawrence
		Northumberland
		Schuykill
		Venango
	6	Armstrong
		Bedford
		Bradford
		Clearfield
		Clinton
		Greene
		Huntingdon
		Montour
		Tioga
		Union
		Warren
	7	Cameron
		Clarion
		Elk
		Jefferson
		McKean
		Mifflin
		Potter
		Snyder
		Wayne
	8	Fulton
		Juniata
		Pike
		Sullivan
		Susquehanna
	9	Forest

TABLE A2

VARIATION IN LOCAL GOVERNMENT EXPENDITURES
BY COUNTY TYPE: 1982

County Type	Number of Counties	TOTAL LOCAL GOVERNMENT EXPENDITURES Mean	Standard Deviation	Percent Coefficient of Variation
		MARYLAND		
0	1	$1,671	-	-
1	11	1,025	181	17.65
2	1	788	-	-
3	2	870	46	5.33
6	3	690	54	7.84
7	4	970	224	23.10
8	2	910	119	13.06
		MASSACHUSETTS		
0	4	$1,102	136	12.36
1	1	928	-	-
2	4	890	89	9.98
3	1	842	-	-
4	2	989	125	12.66
7	1	2,179	-	-
9	1	1,530	-	-
		NEW YORK		
0	2	$1,938	395	20.36
1	6	1,729	184	10.64
2	22	1,410	143	10.11
3	1	1,276	-	-
4	9	1,383	102	7.37
5	3	1,482	106	7.14
6	10	1,442	270	18.74
7	3	1,477	243	16.45
8	2	1,802	716	39.72
		PENNSYLVANIA		
0	2	$1,285	183	14.22
1	8	829	131	15.84
2	21	811	158	19.43
3	2	789	62	7.90
4	8	773	95	12.31
6	11	857	306	35.69
7	9	752	158	20.99
8	5	666	94	14.15
9	1	749	-	-

SOURCE: Governmental Finances, Census of Governments, U.S. Bureau of Census, 1982

TABLE A3

VARIATION IN LOCAL GOVERNMENT REVENUES
BY COUNTY TYPE: 1982

County Type	Number of Counties	TOTAL LOCAL GOVERNMENT REVENUES		
		Mean	Standard Deviation	Percent Coefficient of Variation
		MARYLAND		
0	1	$1,802	-	-
1	11	1,064	199	18.67
2	1	706	-	-
3	2	872	11	1.29
6	3	761	47	6.24
7	4	975	302	31.05
8	2	932	132	14.15
		MASSACHUSETTS		
0	4	$1,410	730	51.80
1	1	949	-	-
2	4	944	102	10.79
3	1	874	-	-
4	2	1,076	142	13.19
7	1	2,005	-	-
9	1	1,577	-	-
		NEW YORK		
0	2	$2,156	653	30.28
1	6	1,738	180	10.38
2	22	1,412	150	10.61
3	1	1,247	-	-
4	9	1,386	98	7.08
5	3	1,464	111	7.61
6	10	1,409	236	16.77
7	3	1,416	231	16.35
8	2	1,663	760	45.71
		PENNSYLVANIA		
0	2	$1,481	222	15.01
1	8	903	145	16.05
2	21	864	136	15.75
3	2	860	50	5.78
4	8	798	74	9.27
6	11	855	152	17.81
7	9	795	118	14.87
8	5	721	104	14.39
9	1	1,087	-	-

SOURCE: Governmental Finances, Census of Governments, U.S. Bureau of Census, 1982

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